# “A CLINICAL STUDY TO ASSESS THE ROLE OF VITAMIN D DEFICIENCY IN HASHIMOTO’S THYROIDITIS AND EFFICACY OF SYNTHESIS REPERTORY”

A DISSERTATION SUBMITTED IN PARTIAL FULLFILLMENT OF THE

REQUIREMENT

FOR THE AWARD OF THE DEGREE OF

**DOCTOR OF MEDICINE IN HOMOEOPATHY: M.D.(Hom.)**

**IN**

**REPERTORY**

**By**

**Dr. SANOFER NAZEEMA S**

UNDER THE GUIDANCE OF

**Dr. V. SATHISH KUMAR M.D (Hom.)**

PROFESSOR & HEAD, DEPARTMENT OF REPERTORY

**SARADA KRISHNA HOMOEOPATHIC MEDICAL COLLEGE**

**KULASEKHARAM, KANYAKUMARI DISTRICT, TAMILNADU**

**SUBMITTED TO**

**THE TAMILNADU Dr M G R MEDICAL UNIVERSITY, CHENNAI**

---

**2021**

# CERTIFICATE BY THE GUIDE

This is to certify that the Dissertation entitled **"A CLINICAL STUDY TO ASSESS THE ROLE OF VITAMIN D DEFICIENCY IN HASHIMOTO'S THYROIDITIS AND EFFICACY OF SYNTHESIS REPERTORY"** is a bonafide work of **Dr. SANOFER NAZEEMA S.** All her work has been carried out under my direct supervision and guidance. Her approach to the subject has been sincere, scientific and analytic. This work is recommended for the award of degree of **DOCTOR OF MEDICINE (Homoeopathy)** in **REPERTORY** of **THE TAMILNADU, DR. M. G. R MEDICAL UNIVERSITY, CHENNAI.**

Place: Kulasekharam

Date:

**Dr. V. SATHISH KUMAR M.D. (Hom.)**

Professor and Head, Dept. of Repertory

# ENDORSEMENT BY THE HEAD OF THE DEPARTMENT AND THE INSTITUTION

This is to certify that the dissertation entitled "**A CLINICAL STUDY TO ASSESS THE ROLE OF VITAMIN D DEFICIENCY IN HASHIMOTO'S THYROIDITIS AND EFFICACY OF SYNTHESIS REPERTORY"** is a bonafide work carried out by **Dr.SANOFER NAZEEMA S** student of **M.D (Hom.)** in **DEPARTMENT OF REPERTORY** (2018-2021) in the **SARADA KRISHNA HOMOEOPATHIC MEDICAL COLLEGE AND HOSPITAL, KULASEKHARAM, KANYAKUMARI DISTRICT, TAMILNADU** under the supervision and guidance of **Dr. V. SATHISH KUMAR M.D (Hom), PROFESSOR & HEAD, DEPT. OF REPERTORY** in partial fulfilment of the regulations for the award of the degree of **DOCTOR OF MEDICINE (HOMOEOPATHY) in REPERTORY.** This work confirms to the standards prescribed by **THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI.**

This has not been submitted in full or part for the award of any degree or diploma from any University.

**Dr. V. SATHISH KUMAR M.D (Hom)**
Professor& Head, Dept. of Repertory

**Dr. N. V. SUGATHAN, M.D.(Hom).,PhD**
PRINCIPAL

Place: Kulasekharam

Date:

# DECLARATION

I, **Dr. SANOFER NAZEEMA S** do hereby declare that this dissertation entitled "**A CLINICAL STUDY TO ASSESS THE ROLE OF VITAMIN D DEFICIENCY IN HASHIMOTO'S THYROIDITIS AND EFFICACY OF SYNTHESIS REPERTORY"** is a bonafide work carried out by myself under the direct supervision and guidance of **DR. V. SATHISH KUMAR M.D (HOM.) PROFESSOR & HEAD, DEPT. OF REPERTORY,** in partial fulfilment of the regulations for the award of degree of **DOCTOR OF MEDICINE (HOMOEOPATHY)** in **REPERTORY** of **THE TAMIL NADU DR. M.G.R MEDICAL UNIVERSITY, CHENNAI**. This has not been submitted in full or part for the award of any degree or diploma from any University.

Place: Kulasekharam **Dr. SANOFER NAZEEMA S**

Date :

# ABSTRACT

**ABOUT THE STUDY:**

Hashimoto's thyroiditis (HT) is an autoimmune disease (AID) where the cell and antibody mediated response attack the thyroid gland. It has many systematic manifestations. The exact cause is unknown but there are many risk factors for HT. Vitamin D is majorly considered as one among them. Vit D has been considered to be an active as an immunomodulatory in AID such as HT. The diagnosis is based on the elevated levels of thyroglobulin antibody (TgAb) and anti-thyroid peroxidase antibody (TPOAb), where TPOAb is more authentic. Since this is an autoimmune disease, the treatment period may get prolonged. The main aim of this study is to assess if Vit D deficiency is a major risk factor for HT and also to prove the efficacy of Homoeopathy in autoimmune diseases like HT.

**AIM AND OBJECTIVES:**

- To study the role of Vitamin D in Hashimoto's thyroiditis and also to assess variation in the levels of Vit D before and after treatment.
- To study frequently used rubric in synthesis repertory on HT and its complications.
- To find the remedies used in the treatment of HT using synthesis repertory.

**MATERIALS AND METHODS**:

Randomly 30 cases presenting with similar symptoms of hypothyroidism or HT from Sarada Krishna Homoeopathic Medical College's OPD and peripheral centres was selected. Detailed case was taken and recorded in SKHMC standardized chronic case record format. Symptom analysis has been followed. Remedies have been chosen with the help of rubrics selected from the synthesis repertory. Prescription, follow up, analysis, repetition and dosage has been done as per the directions of 5th and 6th edition of Organon of medicine. Follow up assessment was done in every month. Changes before and after has been subjected to statistical analysis and presented.

**RESULT**:

Among the 30 cases, 28 cases were deficient in Vitamin D before the treatment proving that, individuals with Hashimoto's thyroiditis are majorly deficient in Vitamin D. Out of the 30 cases 9 cases showed moderate improvement, 17 cases showed marked

improvement and only 4 cases showed mild improvement from the prescriptions based on Homoeopathic philosophy using synthesis repertory. And also out of the 30 cases, 24 cases showed mild improvement in the values of Vit D and 6 cases shows reduction in the Vitamin D levels.

There was observable reduction in intensity of symptoms in the study population. The t – value of Zulewski score before and after treatment is -24.08. The p value is $< 0.00001$. The result is significant at $p \leq 0.05$. There was also observable mild improvement in values of Vit D among the study population. The t-value of Vitamin D before and after treatment t' is 4.8253. The p value is $< 0.00001$. The result is significant at $p \leq 0.05$. Using spearman rank correlation, the relation between the levels of Vit D and intensity of HT was assessed in the study population. The value of Spearman rank correlation coefficient '$r_s$= 0.057 with the p value =0.76666 , which shows there is no correlation between Vit D levels and intensity or severity of the disease.

**CONCLUSION:**

Among 30 female patients within the age group of 8 to 60, Vitamin D deficiency is majorly associated with HT. Homoeopathy can successfully treat autoimmune diseases like Hashimoto's thyroiditis, helps to boost up the immunity in the individual and also improve the levels of Vitamin D provided, the remedy is selected based upon the totality of the symptoms. In this study there is significant reduction in Zulewski score and improvement in Vitamin D levels. The remedy that was frequently prescribed is Natrum Muriaticum and LM potency shows marked improvement in treating the cases.

**KEY WORDS:**

Vitamin D deficiency, Hashimoto's thyroiditis, Thyroid antibodies, 25-hydroxy Vitamin D3, Natrum Muriaticum, LM Potency, Synthesis Repertory.

# ACKNOWLEDGEMENT

My first praise to ALLAH, the ALMIGHTY on whom I depend ultimately for sustenance and guidance. He whom Allah guides will not be misled, and he whom Allah misleads will never have a guide. I thank with prayers for bestowing me with wellness, persistence and understanding to accomplish this dissertation.

Secondly, I cannot express enough thanks to my parents, **Mr. M. Shahul Hameed and Mrs. S. Dowleth Nisha,** my sisters **Mrs. Nilofer Nasreen S** and **Miss. Asfer Nazeera S** and my dear nephew **Mast. Mohammed Umar Thariq A**, who have helped and supported me throughout my journey and were willing to provide me everything they can.

I extend my gratitude to **Dr. C. K Mohan, M.D (Hom.)**, the Chairman of this institution, who is the reason behind many budding homoeopaths and spends his lifetimes in to bring up Homoeopathy with all his efforts by providing the necessary facilities that we needed.

It is my genuine pleasure to express my deep sense of thanks to my guide and philosopher, **Dr. V. Sathish Kumar, M.D (Hom.)**, Professor and Head, Department of Repertory, for sharing his knowledge, for his support, advices, guidance, valuable comments, suggestions and provisions that benefited me in completion and success of my study.

I extend my gratitude to the Advisor, **Dr. Ravi M Nair, M.D (Hom.)** and the Principal **Dr. Sugathan N.V, M.D (Hom.),PhD** for helping me in all possible ways theough out the study.

I wish to express my sincere thanks to Professor and PG coordinator, **Dr. Winston Vargheese, M.D (Hom.)** for all he has supported me during the study.

I extend my sincere gratitude to my research advisor, **DR.Chandraja Ratheesh, Ph.D.**, for all her efforts, patience, motivation and immense knowledge, without her my study would not be complete.

I take this opportunity to record my sincere thanks to **Dr. A.S Suman Sankar, M.D (Hom.)., PhD., Dr. Chandrahasan C.M, M.D (Hom.)**, **Dr. Priyanka P.S, M.D (Hom.)** and **Dr. Suja S.P, M.D (Hom.).**

I am indebted to my special sisters, **Dr.Salma Tasneem S., M.D (Hom.)** and **Dr.Fathima Mujahitha M.D (Hom.)** for their love, assistance, guidance and support all through my PG course and in this study.

I wish to convey my very special thanks to my friends, **Dr. Mohamed Owais** and **Dr. Architha Aishwarya** and my brothers **Dr. Arun Kumar** and **Dr. Mohammed Shahul Irfan** had got me going through all the tough times and managed to pursue with me in both UG and PG.

I must also thank my well-wishers **Dr.Libi.P.S .D (Hom.)** and **Dr.Aswathi S Pillai** for their persistent support and help they have provided me. I also thank my batch mates, **Dr.Sruthi Krishna, Dr.Susira Suresh, Dr.Yoga** and my juniors **Dr.Vishnu Priya and Dr.Aarathy** for their timely help in completing this work.

I would also appreciate my sub-juniors, **Dr.Rathi, Dr.Anjith, Dr.Keerthana, Dr.Varadha and Dr.Nivitha** for their enthusiasm and support.

I also thank all my non-teaching staff who has directly or indirectly helped me during my studies.

**Dr. SANOFER NAZEEMA S**

# TABLE OF CONTENTS


| SL. NO. | CONTENTS | PG NO |
|---|---|---|
| **1.** | Introduction | **1** |
| **2.** | Aim And Objectives | **4** |
| **3.** | Review Of Literature | **5** |
| **4.** | Materials And Methods | **28** |
| **5.** | Observations And Results | **31** |
| **6.** | Statistical Analysis | **50** |
| **7.** | Discussion | **58** |
| **8.** | Limitations And Recommendations | **66** |
| **9.** | Conclusion | **67** |
| **10.** | Summary | **69** |
| **11.** | Bibliography | **71** |
| **12.** | Appendices | **78** |

## LIST OF FIGURES


| FIG. NO. | DESCRIPTION | PAGE NO |
|---|---|---|
| 1. | Structure Of Vitamin D | **6** |
| 2. | Synthesis Of Vitamin D | 7 |
| 3. | Action Of Vitamin D On Lungs And Kidney | 10 |
| 4. | Distribution Of Cases According To Age Group | 31 |
| 5. | Distribution Of Cases According To Occupation | 32 |
| 6. | Distribution Of Cases According To The Socio Economic Status | 33 |
| 7. | Distribution Of Cases According To First Prescription | 34 |
| 8. | Distribution Of Cases According To First Potency | 34 |
| 9. | Disribution Of Cases According To The Frequently Used Rubrics | 36 |
| 10. | Distribution Of Cases Based On The Improvement Of Symptoms | 37 |
| 11. | Distribution Of Cases According To Miasm | 38 |
| 12. | Improvement Of Cases Based On Zulewski's Clinical Score | 40 |
| 13. | Improvement Of Cases Based On Tsh Level | 42 |
| 14. | Improvement Of Cases Based On Thyroglobulin Antibody | 44 |
| 15. | Improvement Of Cases Based On Thyroid Peroxidase Antibody | 46 |
| 16. | Improvement Of Cases Based On Vitamin D 25(OH)D | 48 |
| 17. | Distribution Of Cases According To Improvement | 49 |

## LIST OF TABLES


| TABLE NO | DESCRIPTION | PAGE NO |
|---|---|---|
| **1.** | Versions Of Synthesis Repertory | **23** |
| 2. | Distribution Of Cases According To Age Group | **31** |
| 3. | Distribution Of Cases According To Occupation | **32** |
| 4. | Distribution Of Cases According To Socio Economic Status | **33** |
| 5. | Distribution Of Cases According To First Prescription | **33** |
| 6. | Distribution Of Cases According To First Potency | **34** |
| 7. | Disribution Of Cases According To The Frequently Used Rubrics | **35** |
| 8. | Distribution Of Cases Based On The Improvement Of Symptoms | **37** |
| 9. | Distribution Of Cases According To Miasm | **38** |
| 10. | Improvement Of Cases Based On Zulewski's Clinical Score | **39** |
| 11. | Improvement Of Cases Based On Tsh Level | **41** |
| 12. | Improvement Of Cases Based On Thyroglobulin Antibody | **42** |
| 13. | Improvement Of Cases Based On Thyroid Peroxidase Antibody | **45** |
| 14. | Improvement Of Cases Based On Vitamin D 25(Oh)D | **47** |
| 15. | Improvement Of Cases Based On Improvement | **49** |
| 16. | Statistical Analysis For Zulewski Score | **50** |
| 17. | Paired 'T' Test Results For Zulewski Score | **52** |
| 18. | Statistical Analysis For Vitamin D | **53** |
| 19. | Paired 'T' Test Results For Vitamin D | **55** |
| 20. | Statistical Analysis For Vitamin D And Zulewski Score | **56** |

# LIST OF ABBREVIATIONS

| SL.NO | ABBREVIATION | EXPLANATION |
|---|---|---|
| 1. | & | And |
| 2. | e.g | Example |
| 3. | CT | Computed Tomography |
| 4. | </agg | Aggravation |
| 5. | >/amel | Amelioration |
| 6. | F | Female |
| 7. | M | Male |
| 8. | Gtt | Drops |
| 9. | St | Stat, immediately |
| 10. | No | Number |
| 11. | SL | Saccharum lactis |
| 12. | SG | Sara globe |
| 13. | SD | Sara disk |
| 14. | O/E | On examination |
| 15. | OPD | Outpatient dispensary |
| 16. | Hrs | Hours |
| 17. | Temp | Temperature |
| 18. | BP | Blood pressure |
| 19. | RR | Respiratory rate |
| 20. | Vit D | Vitamin D |
| 21. | HT | Hashimoto's thyroiditis |
| 22. | UV | Ultra violet irradiation |
| 23. | TFT | Thyroid Function Test |
| 24. | $T_3$ | Triiodothyronine |
| 25. | $T_4$ | Thyroxine |
| 26. | TSH | Thyroid Stimulating Hormone |
| 27. | TPO | Thyroid Peroxidase Antibody |
| 28. | AITD | Auto Immune Thyroid Diseases |
| 29. | RADAR | Rapid Aim to Drug aimed research |

| | | |
|---|---|---|
| 30. | FNAC | Fine Needle Aspiration Cytology |
| 31. | USG | Ultrasound Sonography |
| 32. | NP | Nothing Particular |
| 33. | FMP | First menstrual period |
| 34. | LMP | Last menstrual period |
| 35. | Qty | Quantity |
| 36. | H/O | History of |
| 37. | P/t | Patient |
| 38. | etc | Et cetera |

# LIST OF APPENDICES


| SL. NO. | TABLES | PAGE NO |
|---|---|---|
| 1. | Appendix – I : Ethical Clearance Certificate | |
| 2. | Appendix – II: Glossary | **78** |
| 3. | Appendix – III: Case Record Format | **80** |
| 4. | Appendix – IV: Zulewski's Clinical Score | **91** |
| 5. | Appendix – V: Patient Information Sheet And Written Consent Form | **92** |
| 6. | Appendix – VI Sample Cases I & II | **96** |
| 7. | Appendix – VII: Case Summary | **126** |
| 8. | Appendix – VIII: Master Chart | **136** |
| 9. | Appendix IX: Follow Up Chart | **152** |

# 1.INTRODUCTION

Researches are increasing day by day, to find out the factors that can be the cause for various systemic and complicated diseases. Homoeopathy is a holistic system of medicine that treats the affected individual based on the law of SIMILIA SIMILIBUS CURENTER. The main goals of my study are to understand the necessity of Vitamin D in Hashimoto's thyroiditis and also to prove that Homoeopathic treatment has marked effects on the immune system by treating Hashimoto's thyroiditis.

Vit D is a fat-soluble vitamin and worldwide its deficiency is prevalent. On sun exposure, about 90% of the Vit D that is necessary is synthesized in the skin. It contains ultraviolet B (UV-B) radiation. There are very few dietary sources.[(1)] The effects and consequences of its deficiency are still being explored by various researchers. In various studies, it is found that Vitamin D has immunomodulatory properties. It has been stated that Vit D deficiency increases the risk of AIT (autoimmune thyroiditis). [(2)]

HT is a disease that comes under autoimmune thyroid diseases. It is proved to be the main reason for hypothyroidism which results in autoimmune damage to the thyroid gland.[(3)] The other condition is Grave's disease which is the cause of hyperthyroidism. Earlier, it was believed wrongly that HT is a rare diagnosis but recent studies have stated that it is one of the common diseases which is left unnoticed and untreated unless there is a complication.

Synthesis repertory has become the most favourite repertory of the modern era which is authored by Dr.Frederick Schroysens. This repertory is a glorious result of continuous teamwork and technology. RADAR (Rapid Aid to Drug Aimed Research), in it's printed for is Synthesis repertory. It contains information on nearly all new remedies, clinical information from a variety of established sources, and all data from the works of Dr.Hahnemann, Dr, Boenninghausen, Dr.Kent, Dr.Phathak, Dr.Boger, and many others. Its outline is mainly based on Kent's repertory.[(4)]

Thyroid disorders have become a serious issue among the population of India. It is found that most females are easily affected by thyroid disorders and many are autoimmune by origin. The exact cause of autoimmune diseases remains unknown. Deficiency of Vit D

has become a common sustaining defective condition among the people of India. The recent study in India is concentrated to find as to how deficiency of Vit D serves as one of the major risk factors for HT.

In a recent study, it has been stated that the Kanyakumari district has more cases of Hypothyroidism.[5] Iodine deficiency was believed to be the major cause of Hypothyroidism. [6].But as far as I have observed majority of the hypothyroidism patients in Kanyakumari are already the victims of Hashimoto's thyroiditis.

**NEED FOR THE STUDY:**

Deficiency of Vit D is reported globally and it is equally present in both sunshine sufficient and deficient countries. Still, it one among the diagnoses left undetected and nutritional deficiencies left untreated. Many studies have shown this persisting deficiency having no relation to age, sex, and geography. Studies based on hospitals shows that deficiency of Vit D ranges from 37% to 99%. [1]

A recent study state, even places like Chennai which is bathed in sunlight, all through the year shows 80% of Vit D deficiency. Metropolis Healthcare which is a worldly network of pathological labs conducted a study. It shows that, in Chennai eight in ten people suffer with deficiency of Vit D. The study also reveals that 88 percent of people under the age group of 10 - 20 years have deficiency of Vit D.[7] The area of Kanyakumari district is bounded mostly by sea and mountains and when compared to Chennai exposure of the people to sunlight is lesser in this region.

After six years of age, HT has become one of the most common causes of hypothyroidism all over the world. The incidence is estimated at 3.5 in every 1000/year in women and 0.8 in every 1000/year in men.[8] In a study on HT in India, 6283 girls from schools all over the country were screened. Goitre was found in 1810 girls. Among them, a FNAC was done for 764 girls, and among them, 7.5% (58 girls) had evidence of juvenile AIT. Among FNAC-confirmed cases of juvenile AIT, overt hypothyroidism and subclinical was seen in 6.5% and 15%, respectively [8]

SCOPE OF THE STUDY

According to the latest thyroid disorder study in Tamil Nadu, consisting of 61 cases, Anti-TPO and Anti-TGO levels were correlated. Out of 61 cases, 21 children

showed overt hypothyroidism (34.43%) and the remaining cases have subclinical thyroid symptoms (65.57%). FNAC confirmed autoimmune thyroiditis in 43 children within the case group.[9] So proving the efficacy of homoeopathic treatment in autoimmune diseases like Hashimoto's thyroiditis is very much necessary.

In a publication, "Effectiveness of Natrum Muriaticum 1M on reduction of TSH level in females between age group 35 to 55 years", it has been proved that Natrum Muriaticum is very effective in the management of hypothyroidism.[10] And also in an article, "Homoeopathy for Anti-thyroid Peroxidase Antibody titer in Hashimoto's thyroiditis – a clinical study" in Annals of the Romanian Society foe Cell Biology, have proved that individualized homoeopathic medicine is effective in reducing the level of anti-TPO Ab titer in treating cases of HT. [11]

HT has a long list of risk factors and Vit D deficiency is one among them. In modern medicine Vitamin D is given in a synthetic form to improve the level of Vit D in an individual. As Vit D deficiency and HT are having increased rates, I have taken up this study to figure out the role of Vit D deficiency in HT and also to prove that Homoeopathy can be efficient in treating HT.

**STATEMENT OF THE PROBLEM**

Among the patients coming to Sarada Krishna Homoeopathic Medical College and Hospital's OPD, peripheral centres and IPD, this study was conducted. Cases with symptoms of Hypothyroidism with elevated levels of TSH and thyroid antibodies were taken for the study. Vit D values were also correlated before and after the study.

# 2. AIM AND OBJECTIVES

- To study the role of vitamin D in Hashimoto's thyroiditis and also to assess variation in the levels of vitamin D before and after treatment.
- To study frequently used rubric in synthesis repertory on Hashimoto's thyroiditis and its complications.
- To find the remedies used in the treatment of Hashimoto's thyroiditis using synthesis repertory.

# 3. REVIEW OF LITERATURE

Vit D is a cluster of fat-soluble secosteroids. It is the reason for many physiological actions in the body. It helps to increase the absorption in the intestine for calcium, phosphate magnesium and many other functions of Vit D are still yet to be discovered. The primary compounds of Vit D are Vit D3 and Vit $D_2$. Vit D3 is a natural form of Vit D and it is synthesised as a result of UV irradiation of 7-dehydrocholesterol in the skin.[12]

## DISCOVERY OF VITAMIN D

Funk first suggested the idea of Vitamin D. He explained about 'vital amine' present in the food is essential for and survival and health. In United Kingdom, there were increasing rated of rickets and it was called as the "English Disease" Sir Edward Mellanby of Great Britain was very concerned about this disease.

Sir Mellanby used primarily oatmeal which is the diet of Scottish people to feed it to the dogs and by no intension kept them indoors and away from the sunlight. He was able to cure the disease by giving cod liver oil and assumed that Vit A was responsible for its prevention. Mc Collum, was following this study. He decided to test the hypothesis, if Vit A cured the disease. He destroyed Vit A by passing oxygen through cod liver oil. He figured out that the preparation was not able to prevent xerophthalmia but it healed rickets. He finally stated that, "The cure took place because of a new Vitamin and called it Vitamin D". [12]

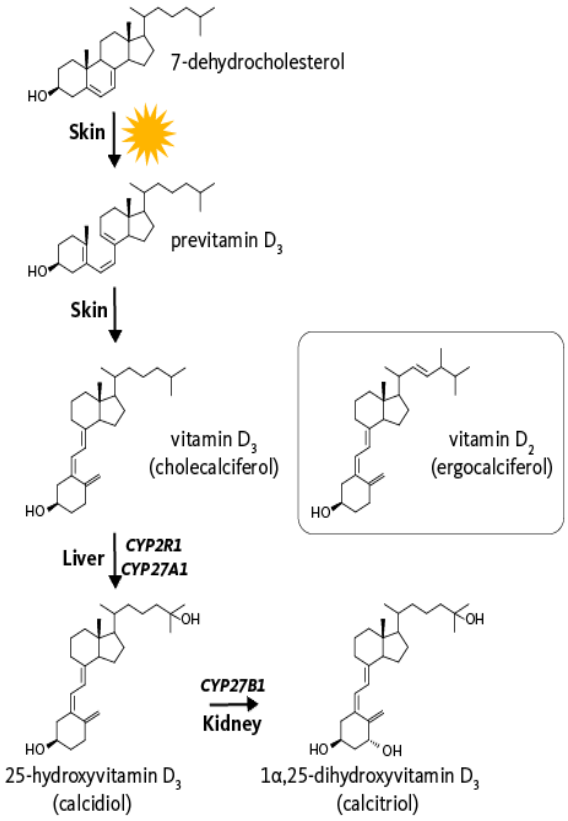
## DISCOVERY OF STRUCTURE OF VITAMIN D

The structure of Vit D was discovered in the year 1932 by Askew. Vitamin D2 was isolated from an irradiation mixture of ergosterol. Windus and Linsert proved that Vit D1 is an artefact of adduct between vit D2 and lumisterol. Vit D2 was the first Vit D to be identified and isolated. 7-Dehydrocholesterol was isolated by Windaus in 1935. In 1937 Windus and Bock identified Vit D3.

## VITAMIN D – A TRUE VITAMIN

The characteristic type of Vit D is Vit D3 and it is synthesised in the skin using of UV light of 7-dehydrocholesterol, likewise called as provitamin D3. It is likewise assimilated from the food. In 1978, Esvelt disengaged and recognized Vitamin D3 by mass spectrometry. Holick additionally demonstrated with proof that Vit D3 is formed in the skin.[13]

FIGURE NO: 1




**STRUCTURE OF VITAMIN D**

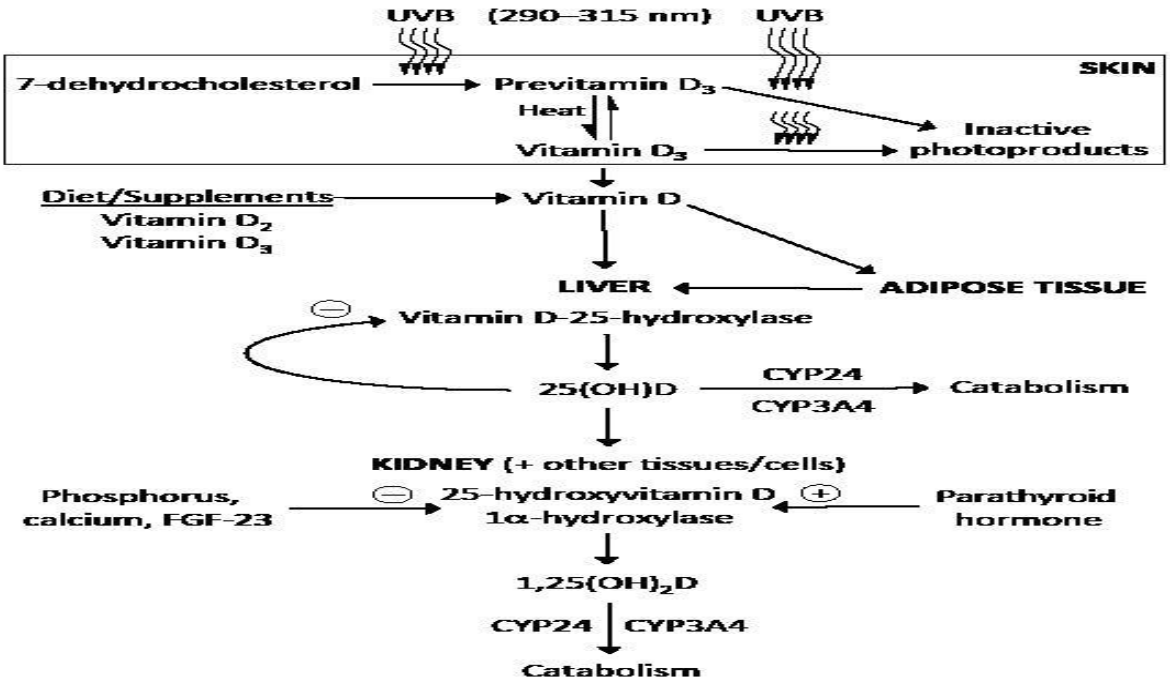
## SYNTHESIS OF VITAMIN D

At the point when the human skin is presented to bright (UV) radiation, particularly the radiation that has a more limited frequency beneath 315nm, Vitamin D3 is orchestrated. Generally UVB radiation is taken for amalgamation since it has frequency of 280-315 nm. The UBV radiation falling on the skin photoisomerises 7-dehydrocholesterol (7DHC) to previtamin D3. Later the previtamin D3 goes through a warmth isomerisation in the skin and Vitamin D3. This interaction requires a few hours. Now and then the

previtamin D3 is further photoisomerised into one of the two idle isomers named as lumisterol and tachysterol or changed over back to 7DHC. Every response will bring about ranges with various frequencies and a delayed illumination will result in a semi equilibrium combination of isomers. The previtamin D3, which is framed inside the combination through daylight, is just 12-15 %. [14]

Vitamin D gets joined to a D-restricting protein and afterward enters the dissemination. On the off chance that it stays in the skin for quite a while, after additional UV radiation separates the Vitamin D3 and it is not, at this point valuable. In the liver, the Vit D3 is first hydroxylated to 25-hydroxyvitamin D3 (25(OH) D3). At that point in the kidney it is hydroxylated to its dynamic structure as, (1,25(OH)2D3 1,25-dihydroxyvitamin D3. When 1,25(OH)2D3 is free adequately, 24,25-dihydroxyvitamin D (24,25(OH)D) is formed.[15]. The genuine proportion of the coursing Vit D in the body is esteemed with the degree of 25(OH)D. This 25-hydroxyvitamin D doesn't separate the degree of Vit D2 and Vit D3 which is got from the dietary enhancements and from the sun openness individually. The degree of circling 25(OH)D can be expanded dependent on the openness to the sun, however the degree of 1,25(OH)2D is simply founded on the working of the endocrine system.[14]

FIGURE NO: 2




**SYNTHESIS OF VITAMIN D**

## PHYSIOLOGICAL PATHWAY OF VITAMIN D

The Vit D metabolites that are bound to the Vit D binding protein runs in the body. The dynamic metabolite 1,25(OH)D, enters the cell and ties to the Vit D receptor. This is followed by transcription and translation and the proteins, for example, calcium binding protein or osteocalcin are framed. The impact of 1,25(OH)2D happens in the intestinal cells which helps in dynamic calcium transport. Through the layer proteins the calcium enters the cell. The 1,25(OH)2D ties with the Vit D receptor and the calcium binding protein is orchestrated. This controls the dynamic transport through the cell. To the extra cellular fluid the calcium is moved by ATP-dependent mechanism. There is additionally another mechanism where the calcium is moved through paracellular dissemination. This aloof ingestion doesn't add to a most extreme, and it is reliant only upon the calcium admission.

## FUNCTIONS OF VITAMIN D

Calcium digestion is the significant function of Vit D. It likewise has the capacity to change the cell movement, cell multiplication and cell differentiation and subsequently assumes a significant part in the physiological elements of the body and furthermore in looking after health.[16]. The Vit D receptors are available in most 'non-classical' target tissues of the body. It includes heart muscle, brain, colon, lungs, thyroid, liver, smooth muscle, skin, prostrate, immune system and numerous others.[17]

ON BONES:

The skeletal cells contain osteoblasts, chondrocytes and osteoclasts. These cells contain the Vit D receptors and the protein CYP27B1 which is needed for creating the dynamic metabolite of Vit D. Through the osteoblast, the incitement of osteoclastogenesis is set up by 1,25(OH)2D. The Vit D metabolites, 24,25(OH)2D and 1,23(OH)2D have shown great role during the time spent in endochondral bone development. The Vitamin D aiding in break avoidance are a mix of expanded intestinal calcium retention, expanded bone mineral thickness and diminished danger of falls.[18]

ON MUSCLES:

Vit D has molecular functions in the muscle tissue including genomic and non-genomic effects. The genomic effects are initiated by binding of 1,25(OH)2D to the nuclear

receptor which results in changes in gene transcription of messenger RNA and subsequent protein synthesis. Non-genomic effects are fast and is mediated through membrane-bound Vit D receptor.[17]

ON HEART:

Heart muscle is also a target organ for the Vit D receptors. [19]. It has been proved that it increases the active stress generation by a myosin light chain phosphorylation-dependent mechanism and increasing myofilament Ca2+ sensitivity.[20] Likewise association of 1,25(OH)2D and blood pressure has been demonstrated in normotensive man, myocardial infarction was inversely associated with plasma 25(OH)D. [21] Vitamin D metabolites have many Renoprotective effects like suppression of renin-angiotensin-aldosterone system, antiproteinuric effects and also have anti-inflammatory effects. It is necessary to maintain the normal myocardial structure and function.

MOOD

Vitamin D regulates the mood of the individual and scientifically it is made clear.

COGNITIVE FUNCTIONS

Vitamin D has many neuroprotective roles. It helps to get rid beta-amyloid protein that is abnormally present in the brain causing Alzheimer's disease.

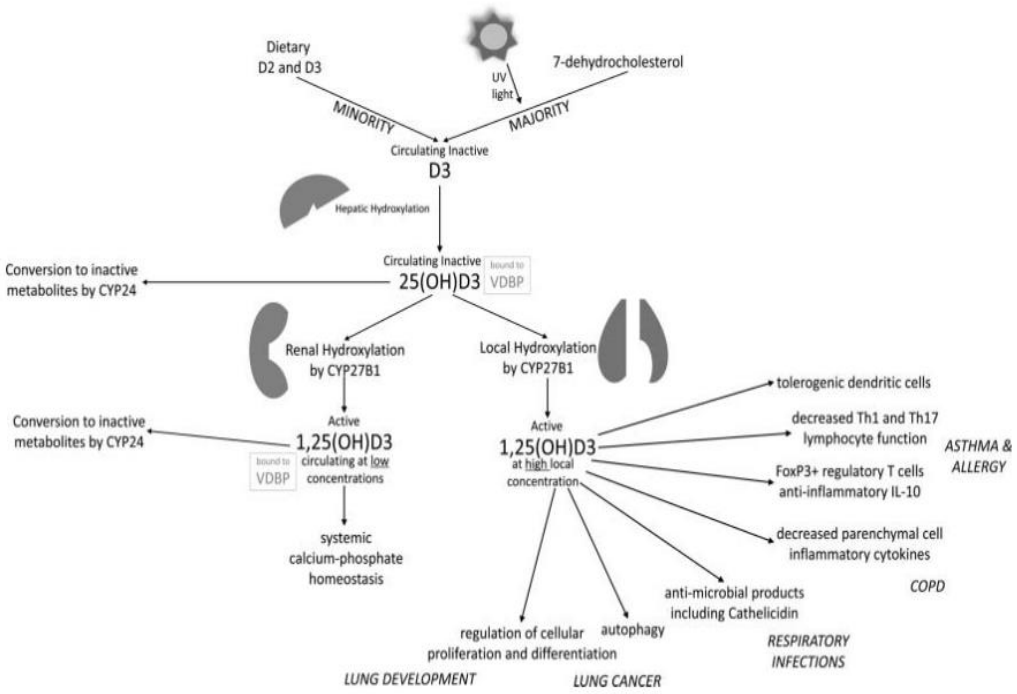
ON THYROID GLAND

McDonell found a strong similarity between molecular structure of Vit D3 receptor and the receptor of for thyroid hormone The first one is a 70 amino acid and the latter is a 62 amino acid, which is located towards the carboxyl terminus of the proteins.[22] This was confirmed by Berg. This was the basic research for thyroid and Vit D relation.

IMMUNE RESPONSE

Vit D acts on innate immune responses which help in the production of antimicrobial peptides and autophagy and also accts on adaptive immune responses like promoting regulatory lymphocytes. The important role for autophagy is, killing the neoplastic cells.[23]

FIGURE NO: 3




ON LUNGS

1,25(OH)D3 reduces the production of inflammatory cytokines chemokines (leucocyte attracting CXCL10 and (interleukin-8) from the stimulated epithelial cells. Antimicrobial response is strengthened in the presence of Vit D. Vit D acts on the parenchymal and acts on cell differentiation and cell proliferation. In the prevention and treatment of lung cancer, the regulation of cell proliferation is important. It helps in early protection against pathogens. Antimicrobial peptides like cathelicidin are synthesised with the help of Vit D.[24]

**VITAMIN D DEFICIENCY:**

**EPIDEMILOGY:**

The predominance of Vit D lack is high in numerous pieces of the world. It is pandemic everywhere on the Indian subcontinent, with a predominance of 70%-100% in everybody. Subclinical Vitamin D is exceptionally pervasive in both metropolitan and provincial settings and across all financial and geographic status.[25] In 2011,a school-put together investigation with respect to 214 pre menarche young ladies in Pune was directed by Kadam et al showing a pervasiveness of 34.2% of Vit D. [1]

## EFFECTS OF VITAMIN D DEFICIENCY

ON SKELETAL SYSTEM:

The lack of Vit D results in results in hypocalcemia and hypophosphatemia which leads to rickets. Terminal differentiation of the hypertrophic chondrocytes and subsequent calcification of the matrix leads to the flaring of the ends of long bones and the rachitic rosary along the costochondral junction of the ribs. [18]

MUSCLES:

Vit D deficiency causes defectiveness muscle strength. It causes changes in a person's gait, difficulty in rising from a chair, difficulty in climbing the stairs and diffuse muscular pain. These are the clinical symptoms of osteomalacic myopathy. Hypotonia and muscular weakness are the characteristic symptoms of Vit D deficient infants. Pain is severe in the region of the hips and it causes waddling gait.

ON HEART:

Low levels of Vit D status is associated with cardiovascular diseases coronary calcification. It is also associated with sudden cardiac death and heart failure. It is also associated with chronic kidney disease (CKD) patients. It is because of impaired Vit D synthesis in the skin, and loss of Vit D metabolites in the urine. Vit D deficiency causes increased contractility, myocardial hypertrophy, and impaired systolic functions.

DEPRESSION:

Vit D deficiency has been associated with great incidence of depression. In a study in 2014, Vit D3 supplements were compared to anti-depressants. By the end of the study, it was proved that Vitamin D3 had almost equal effects of the anti-depressants.[1]

OBESITY

A Vitamin D deficient individual feels hungry all the time. It doesn't matter how much one eat, one does not get the feeling of satiety. Vitamin D deficiency interferes with the effectiveness and functioning of leptin which is the appetite hormone that makes a person feel that he is full.

COGNITIVE FUNCTIONS:

There are studies that state that Vit D deficiency has led to cognitive impairment in older man and woman. An international study has proved that geriatric group people with Vit D deficiency has twice the risk of Alzheimer's disease.

ON PARATHYROID HORMONE

Vit D deficiency leads to reduction of calcium homoeostasis and includes secondary hyperparathyroidism. It elevates the levels of parathyroid hormone, which in turn increases the blood pressure leading to cardiac problems.

THYROID GLAND

Vit D advances Th2 (Thyroid helper cells) and smothers Th1 movement and it represses cytokine creation which is significant in the improvement of HT. Vit D represses inflammatory reaction in human thyroid cells and T-cells creation of cytokine which prompts the creation of TSH receptors autoantibodies. It is one of the risk factor for Grave's infection. Vit D when binding to its receptor appears to expand expresso of p27, which is a tumor silencer protein. It assumes a vital part in causing harm of the thyroid organ.

ON LUNGS

High predominance of Vit D inadequacy is related with a wide scope of aspiratory sicknesses which incorporates asthma, viral and bacterial lung contaminations, constant obstructive pneumonic illnesses, cystic fibrosis and malignant growth.

CANCER

Vit D has a defensive job in specific tissues by restraining angiogenesis and advances apoptosis. A low degree of Vit D is a risk factor for malignancy of the lung, prostrate, colorectal, prostate, ovary, pancreas, and oesophagus.

**NECESSARY REQUIREMENT OF VITAMIN D:**

As of late a specialist board for the Institute of Medicine suggested that a degree of 20 ng/mL (50 nM) was adequate for 97.5 % of the populace concerning counteraction of bone illness and breaks, albeit up to 50 ng/mL (125 nM) was protected. For people between the

ages of 1 to 70 years old, 600 IU of Vit D was believed to be adequate to meet these objectives, albeit up to 4,000 IU of Vit D was viewed as protected. Bischoff-Ferrari inferred that in any event 700 to 800 IU each day was needed to accomplish the 30 ng/mL (75 nM) level of 25OHD that appeared to be vital for fracture anticipation. [18]

**SOURCES OF VITAMIN D**

Daylight openness is the practical methods for acquiring Vit D. In late spring it has been determined that sun openness give likeness 10,000IU of Vit D and 5-10 minutes in splendid daylight in fair looking people can give 3000IU of daylight. [18]

There are some characteristic sources that can give Vit D when devoured consistently. The most widely recognized ones are oily fish, meat and egg yolk. Dietary Vit D enhancements are given in from of fish liver oil (D3), or blended Vit (D2 or D3). In certain nations, Vit D is added as a fortificant to explicit food varieties in public food supply like margarine, fats, milk and breakfast cereals [25]

Vit D exposure is altered by the following factors: [25]

A) Latitude, season and time of the day.
B) Cloud cover and atmospheric pollution
C) Time spent outdoors
D) Customary dress and sunscreen use
E) Skin pigmentation and age

**LABORATORY TEST:**

25-HYDROXY VITAMIN D BLOOD Test:

According to the Office of Dietary Supplements (ODS), levels of vitamin D are measured by the 25-hydroxy level in nanograms/milliliter (ng/mL). The normal value is approximately considered as 30ng/Ml. The range indicates:

- Severe deficiency: less than 10 ng/mL
- Mild to moderate deficiency: between 10 – 24 ng/mL
- Optimum levels: between 25- 80 ng/mL
- Toxicity : above 80 ng/mL

## HASHIMOTO'S THYROIDITIS

## THYROID GLAND – PRONE TO AUTOIMMUNE DISEASES

The thyroid organ is vital to the human body. The atoms have pleiotropic impacts and assume significant part in keeping up early mental health, substantial development, bone development and the union of mRNA which continually controls the regular functions of the body. However, this organ is exceptionally defenceless against immune system diseases..[26] Chronic immune system thyroid infection is of two sorts. One is HT and other is Grave's Disease. HT is likewise called as immune system thyroiditis..[27] The frequency of constant immune system thyroid illnesses has expanded significantly. in kids, it has become the most well-known reason for obtained hypothyroidism in the non-endemic goiter regions.[26]

Autoimmune thyroid disorders results from interplay of many causes which cannot be defined exactly. They are broadly classified ass genetic, environmental and endogenous factors.

## INTRODUCTION [28]

HT is likewise called as AIT or chronic lymphocytic thyroiditis. It was named after a Japanese physician, Hakaru Hashimoto. He was the principal individual to depict the histological discoveries in 1912. HT is marked by multistep damage and fibrosis of the thyroid parenchyma by the thyroid antibodies. (TAb). It happens as a result of the lymphocytic penetration of the thyroid organ. The thyroid organ progressively loses its capacity to store iodine and deliveries the iodine containing proteins into the plasma.

## EPIDEMIOLOGY

HT is the most pervasive immune system illness which happens in ladies really during the middle adulthood. It happens at a rate of 3.5 of ladies and 0.8 cases of men per 1000 every year. In India, an investigation for HT was done and 6283 students from the country were screened. Goitre was present in 1810 students. Among them 764 subjects went through FNAC, and among them, 7.5% had proof of both HT and central lymphocytic thyroiditis. [8]

## ETIOLOGY

The exact cause of HT remains unknown. Many environmental factors and hereditary disorders play a major role in causing HT.

Nutritional factors, Genetic factors, certain medications, infections, exposure to certain toxins, smoking and stress are other factors that might be responsible for HT.

- Genetic causes: Recent studies have found the genes that play an important role. The HLADR gene locus and non-MHC genes such as CTLA-4, PTPN22, CD40, thyroglobulin (Tg), and TSH receptor genes are some of them. The suppression of CTLA-4 gene seems to increase the vulnerability to immune response by inhibition of T-cell proliferation. It denotes one of early stage of HT.
- Hormones: Females are affected more when compared to males
- Deficiency of Selenium: Selenium is present in large concentration in the thyroid gland which has multiple antioxidant and anti-inflammatory property.
- Iron deficiency: T3 and T4 thyroid hormone synthesis strongly depends upon iron metabolism.
- Vitamin D deficiency: There are many experimental models studying the immunomodulatory effects of Vit D. In one of the clinical context it been postulated that Vit D deficiency might increase the risk of autoimmune diseases, including HT.
- Medications: Drugs taken for thyroid dysfunction, hepatitis, cancer and lithium for bipolar disorder have proved to have side effects that might one of the factors for HT.
- Excessive iodine: Too much iodine may the thyroid gland susceptible to HT.
- Sex steroids and pregnancy: Frequent intake of steroids to prevent pregnancy is also one of the factors. During pregnancy, there is a marked increase in CD4+, CD25+ regulatory T cells which lead to diminished functions of both T cells and B cells, and the rebound from this immunosuppression is thought to contribute to the development of postpartum thyroiditis [(29)]

## SIGNS AND SYMPTOMS OF HASHIMOTO'S THYROIDITIS

In the early stage, HT symptoms are not prominent. Many cases remain symptomless unless it is checked for thyroglobulin antibodies. The early sign that is possible is the

swelling of the thyroid gland, i.e. goitre. The swelling is felt with difficulty in swallowing, breathing and sometimes during sleep. Hashimoto's thyroiditis has no symptoms of its own. The symptoms of Hypothyroidism and HT are the same.

The symptoms are

- Constipation
- Dry skin
- Intolerance to cold
- Thin and frail nails
- Slow heart beat
- Muscle weakness
- Weight gain
- Shortness of breath
- Anaemia
- Menstrual irregularities
- Urinary retention
- Drowsiness
- Mood changes
- Paleness or puffiness of the face

**DIAGNOSIS**

The anti-thyroid antibodies and ultra-sonographic features confirm the diagnosis of HT. In addition FNAC is done to confirm the diagnosis. The basic tests that are done to diagnose a patient as HT are assay of anti-thyroglobulin (Tg), Anti-thyroperoxidase antibody (TPOAb), , and anti-TSH receptor antibodies. [30]

THYROID PEROXIDASE ANTIBODY

Thyroid peroxidase is the vital component for production of thyroid hormones. It is a film bound in the cytoplasm and it is more on the apical microvillar surface of thyrocytes. Thyroid peroxidase immune response is chiefly of IgG class with IgG1 and IgG4 subclass in overabundance. This is the main test for diagnosing Hashimoto's thyroiditis[31]

ANTI THYROGLOBULIN ANTIBODY

Thyroglobulin is emitted by the thyroid follicular cells into the follicular lumen and is put away as colloid. The body produces antibodies to the microsomes that are available inside the thyroid cells when there is any harm to the thyroid cells. Hostile to thyroglobulin antibodies are available in a wide range of autoimmune thyroid problems.

THYROID FUNCTION TEST (T3, T4, TSH)

TFT is the basic test done to diagnose any thyroid related disorders. HT patients mostly have subclinical hypothyroidism with elevated levels of Thyroid Stimulating Hormone (TSH). Improvement in TSH level shows the patients response towards the medication.

ULTRASONOGRAPHY

Thyroid destruction by antibodies or cytotoxicity leads to morphologic and microscopic changes. It includes enlargement of the thyroid gland, parenchymal infiltration by inflammatory cells, fibroblastic proliferation, calcification and vascular proliferation. The characteristic finding for Hashimoto's thyroiditis in ultrasonography is hypoechogenicity, pseudonodules and inhomogenous parenchyma. Even in difficult cases, hypoechogenicity and increased vascularity helps in confirmation of the cases. [32]. Ultrasonography combined with colour flow Doppler sonography is effective for studying differential diagnosis.[33]

FINE NEEDLE ASPIRATION CYTOLOGY

HT is the second most common thyroid lesion next to goitre diagnosed on FNAC. FNAC is highly sensitive in the diagnosis of Hashimoto's thyroiditis with an accuracy rate of 92%. [34]

**EXAMINATION OF THE THYROID GLAND**

There are certain methods of examination of the thyroid gland which is based on physiological reasoning and tradition rather than on studies of reliability or precision.

- **Inspection:** inspection should be done in the anterior and lateral approach. The movement of the thyroid gland must be inspected and the throat must be examined for any abnormal swellings or prominences.

- **Palpation:** Palpation should be done in the anterior and posterior aspect and palpate the thyroid gland, associated muscles and the movement of the gland with a sip of water.
- Along with palpation for size, the texture of the gland, mobility, tenderness and presence of any nodules must be examined.

## MANAGEMENT

Patients with overt hypothyroidism are treated with thyroxine, and the dose is adjusted according to each individual to normalize the serum thyrotropin concentration. In elderly patients, especially those with chronic hypothyroidism or with coexisting ischemic heart disease, treatment is started with a low dosage with increments for every four to six weeks, so that the serum thyrotropin concentration reaches a steady state value after each change in the dose. In pregnant women the dose given is a little higher to maintain the normal level of serum thyrotropin. A large goitre with obstructive symptoms such as dysphagia, voice hoarseness etc. will indicate surgery. [35]

HOMOEOPATHIC MANAGEMENT

The action of Homoeopathic treatment has been proved in various autoimmune disease conditions. Homoeopathy is a mode a treatment that treats the sick individual and not the disease.. Management is done based on the totality of the symptoms which are collected from the patients as per the instructions given by Dr. Samuel Hahnemann in the Organon of medicine unless there is a need for surgery.[36] Intercurrent remedies are given based on the requirement of the patient.

## COMPLICATIONS

- Other autoimmune diseases: The autoimmune nature of HT predisposes patients to the development of other autoimmune diseases. One such disease is SLE, vitiligo, celiac disease, chronic idiopathic urticaria
- **Associated diseases:** Conditions like hypocalcaemia, dyslipidaemia, diabetes mellitus are more prominently found to in patients with HT.
- **Hashimoto's encephalopathy:** Encephalitis is rare neuroendocrine which occurs in patients diagnosed with HT. It affects people of all age group, more

common in women. An underlying immune mechanism is further supported by autopsy studies which reveal histopathological changes such as lymphocyte infiltration of the leptomeninges and gliosis of cortical gray matter, basal ganglia, thalamus and hippocampus which are reminiscent of autoimmune injury to other organs of the body. [37]

- **Neoplasm:** Hashimoto's thyroiditis is said to cause a rare type of neoplastic condition called thyroid lymphoma. It is a specific type of thyroid cancer [38]
- **Cognitive difficulties:** Leads to confusions, sleepiness, hallucination, dementia and tremors.
- **Infertility:** Chronic HT can lead to infertility. It affects the hormones responsible for ovulation and the menstrual cycle becomes irregular.
- **Myxoedema**: This rare, life-threatening condition can develop due to long-term hypothyroidism as a result of untreated Hashimoto's disease. Its signs and symptoms include drowsiness followed by profound lethargy and unconsciousness.
- **Birth defects**: Babies born to women with untreated hypothyroidism due to Hashimoto's disease may have a higher risk of birth. These children are more prone to developmental and intellectual problems; birth defects such as a cleft palate and also it adversely affect the development of the heart, brain and kidney of the intrauterine baby. [39]

## VITAMIN D DEFICIENCY AND HASHIMOTO'S THYROIDITIS

Vit D has been functioning as an immunomodulatory in autoimmune conditions like HT. Low 25(OH)D3 levels seem to build susceptibility for HT. Vit D has a vital part in the pathogenesis of autoimmune disease. Vit D intervenes its impact however binding to Vit D3 receptor (VDR), and actuation of VDR-responsive qualities. [6]

The results of recent study showed that patients with HT had altogether lower serum 25-hydroxycholecalciferol and the pervalence of 25-hydroxycholecalciferol insufficiency was higher in HT subjects. All in all, the new examination showed that perhaps there is a relationship between Vitamin D and HT, particularly in people with 25-

hydroxycholecalciferol levels lower than 20ng/mL. The mechanism for this association and whether it is a cause or result relationship is not clear.[40]

## MIASMATIC APPROACH

HT – Destruction of the thyroid cells (syphilis) which causes reduction in the production of thyroid hormone (Psora/ Syphilis. It leads to clinical manifestations like low metabolic rate (Psora), somnolence (Pseudopsora), tendency to weight gain (Psora/ Sycosis), and sometimes myxoedema (Sycosis).

It may be congenital and secondary or acquired.

- In congenital hypothyroidism there is reduced secretion of thyroid hormone since infancy (Psora).
- In Secondary or acquired hypothyroidism there is deficiency in the functioning of the thyroid gland. It may be due to some causes other than thyroid origin. Onset may be very insidious.

## STUDIES IN HOMOEOPATHY ON HASHIMOTO'S THYROIDITIS

1. Case report on Hashimoto's thyroiditis and homoeopathy

   Dr. Krishneswari RS, Dr. Vishnupriya SV, Dr. Neelima and Dr. KC Muraleedharan

   Abstract: Autoimmune thyroiditis accounts for the most of the Hypothyroidism nowadays and HT is most common. In patients with HT there will be increase in thyroid specific antibodies

   A case reported in the Endocrinology OPD of National Homoeopathy Research Institute in Mental Health, Kottayam with raised levels of thyroid antibodies shows reduction in antibody levels after administration of Homoeopathic medicine. This shows that individualised Homoeopathy is effective in controlling the antibody level in Hashimoto's thyroiditis.
2. An article on "Homoeopathy for Anti-thyroid Peroxidase Antibody titer in Hashimoto's thyroiditis – a clinical study" by V Sathish Kumar, P.S,Priyanka, C.M.Chandrahasen, K.R.Reshmy and G.S.Deepa, in Annals of the Romanian Society foe Cell Biology.

   This is study is put forward to describe the potentiality of individualized homeopathic treatment of HT in female adults by observing changes in anti- TPO

Ab titer in 30 patients presented with symptoms of hypothyroidism along with elevated anti- TPO Ab titer. Effectiveness of the treatment is determined by comparing the before and after treatment of Zuwelski score and antiTPO Ab titer. Thus, individualized homeopathic medicine was found effective in reducing the level of anti- TPO Ab titer in the treatment of HT among which Natrium muriaticum was prescribed in most of the cases.

3. "A Clinical Study to See the Effect of Thyroidinum, a Homoeopathic Preparation on Thyroid Peroxidase Antibody in Subclinical Hypothyroidism of Age Group between 18-70 Years" from International Journal of Health Sciences and Research Vol.10; Issue: 2; February 2020 Website: www.ijhsr.org Original Research Article ISSN: 2249-9571 by Prajakta Ghare , A. B. Jadhav , A. V. Patil. Results showed significant difference in the anti TPO titres at baseline and after treatment. At baseline the mean TPO Ab was 582.7 IU/ml which decreased to 308.6 IU/ml
4. "Efficacy of homeopathic intervention in subclinical hypothyroidism with or without autoimmune thyroiditis in children: an exploratory randomized control study" by Vijay K. Chauhan, Raj K. Manchanda, Archana Narang, Raman K. Marwaha, Saurav Arora, Latika Nagpal, Surender K. Verma, V. Sreenivas, Homeopathy,Volume 103, Issue 4, 2014, Pages 224-231, ISSN 1475-4916,, https://doi.org/10.1016/j.homp.2014.08.004.
   Abstract: The decision to treat subclinical hypothyroidism (SCH) with or without autoimmune thyroiditis (AIT) in children, presents a clinical dilemma. This study was undertaken to evaluate the efficacy of individualized homeopathy in these cases.
5. Mistry BD. A Case of Thyroid Nodule with Resolving Thyroiditis. HOMOEOPATHIC HERITAGE. 1999:44-6.
6. Chammah I, Orfanos-Boeckel H, Schlegel G. "The systemic disease: autoimmune thyroiditis–interdisciplinary collaboration: Homeopathy–micro-immunotherapy–orthomolecular therapy". Allgemeine Homöopathische Zeitung. 2017 Mar;262(02):CM04-02.
7. "Postpartum Thyroiditis and Its Homoeopathic Management" by Sekhar, Sonal and Vyas, Navya (2011*)* Postpartum Thyroiditis and Its Homoeopathic Management. Inventi Rapid: Pharmacy Practice (2). ISSN 0976-3848

**RESEARCH ARTICLES ON VITAMIN D DEFICIENCY AND HASHIMOTO'S THYROIDITIS**

1. "Hashimoto's autoimmune thyroiditis and vitamin D deficiency". Current aspects. Hellenic Journal of Nuclear Medicine. 2014 Jan-Apr;17(1):37-40. DOI: 10.1967/s002449910120.

   . The significant association between vitamin D deficiency and HT has been investigated regarding the immune role of this hormone. Considering current evidence, presented in this review, screening for vitamin D deficiency and careful vitamin D supplementation, when required, may be recommended for patients with HT. Further research is needed in patients with HT in order to investigate the mechanisms by which vitamin D affects autoimmunity and also to evaluate the cost-effectiveness of vitamin D supplementation and to suggest the possible optimal dose treatment.
2. Tamer G, Arik S, Tamer I, Coksert D. "Relative vitamin D insufficiency in Hashimoto's thyroiditis". Thyroid. 2011 Aug 1;21(8):891-6.

   Vitamin D insufficiency, defined as serum levels of 25-hydroxyvitamin D [25(OH)D3] lower than 30 ng/mL, has been reported to be prevalent in several autoimmune diseases such as multiple sclerosis and type 1 diabetes mellitus. The goal of the present study was to assess whether vitamin D insufficiency is also a feature of Hashimoto's thyroiditis (HT).
3. "The Association Between Severity of Vitamin D Deficiency and Hashimoto's Thyroiditis" by Nujen Colak Bozkurt, Basak Karbek, Bekir Ucan, Mustafa Sahin, Erman Cakal, Mustafa Ozbek, Tuncay Delibasi, Endocrine Practice, Volume 19, Issue 3, 2013, Pages 479-484, ISSN 1530-891X, https://doi.org/10.4158/EP12376.OR The relation between vitamin D and autoimmune disorders has long been investigated regarding the important roles of this hormone in immune regulation. We evaluated 25-hydroxyvitamin D (25OHD) status in subjects with Hashimoto's thyroiditis (HT) and healthy controls.
4. Kim D. "Low vitamin D status is associated with hypothyroid Hashimoto's thyroiditis". Hormones. 2016 Jul;15(3):385-93.
5. Mazokopakis EE, Papadomanolaki MG, Tsekouras KC, Evangelopoulos AD, Kotsiris DA, Tzortzinis AA. "Is vitamin D related to pathogenesis and treatment of Hashimoto's thyroiditis". Hell J Nucl Med. 2015 Sep 1;18(3):222-7.

6. Krysiak R, Szkróbka W, Okopień B. “The effect of vitamin D on thyroid autoimmunity in levothyroxine-treated women with Hashimoto’s thyroiditis and normal vitamin D status”. Experimental and Clinical Endocrinology & Diabetes. 2017 Apr;125(04):229-33.
7. Hu S, Rayman MP. “Multiple nutritional factors and the risk of Hashimoto's thyroiditis. Thyroid”. 2017 May 1;27(5):597-610.
8. Štefanić M, Papić S, Suver M, Glavaš-Obrovac L, Karner I. “Association of vitamin D receptor gene 3′-variants with Hashimoto's thyroiditis in the Croatian population”. International Journal of Immunogenetics. 2008 Apr;35(2):125-31.
9. Giovinazzo S, Vicchio TM, Certo R, Alibrandi A, Palmieri O, Campennì A, Cannavò S, Trimarchi F, Ruggeri RM. “Vitamin D receptor gene polymorphisms/haplotypes and serum 25 (OH) D 3 levels in Hashimoto’s thyroiditis”. Endocrine. 2017 Feb 1;55(2):599-606.
10. Kivity S, Agmon-Levin N, Zisappl M, Shapira Y, Nagy EV, Dankó K, Szekanecz Z, Langevitz P, Shoenfeld Y. Vitamin D and autoimmune thyroid diseases. Cellular & molecular immunology. 2011 May;8(3):243-7.

**SYNTHESIS REPERTORY**

Synthesis repertory is edited by Dr. Frederick Schroyens. It is the enlarged edition of 6$^{th}$ edition of Kent’s repertory. Later it included information from various repertories and different established sources. It is based on philosophy of Kent’s generals to particulars. It is linked to the homoeopathic software – RADAR. It has undergone different changes and new versions are being developed.

TABLE NO: 1

| EDITIONS | YEAR OF PUBLICATIONS |
|---|---|
| Version 1 | 1987 computer program |
| Version 2 | April 1988 |
| Version 3 | September 1990 |
| Version 4 | December 1992 |
| Version 5 | February 1994 |
| Version 5 (Indian) | 1996 |
| Version 6 | August 1995 |

| | |
|---|---|
| Version 7 | July 1997 |
| Version 7.1 | February 2001 |
| Version 8 | 2002 |
| Version 9 | 2003 |
| Version 9.1 | 2004 |

The version 9 and version 9.1 have more or less similar content. The main difference is the information about the veterinary treatment. And also in version 9.1 the description of pain is moved to the last level of symptoms. The printed version is like the version of 8.1. The latest version contains 41 chapters and it covers 2373 remedies.

**GRADATION OF THE REMEDIES:**

- **BOLD CAPITAL**
- **Bold small**
- *Italics*
- Roman

**Hierarchy of rubrics:**

The rubrics are arranged in the following order:

- Side
- Time
- Modality
- Extension
- Localization
- Sensations (description of pain)

**Source Books:**

Kent's repertory, Hahnemann's works, Kent's materia medica, Hering encyclopedia, Knerr's repertory, Allen's encyclopedia, Robert's sensations as if, Clarke dictionary, William boericke materia medica, Pathak's materia medica, Borland's books, Tyler's drug pictures, Additions from henry Allen's Nosodes, reviews of carcinosum, psorinum, different strains of tuberculinum and medorrhinum. The largest number of additions in this category is derived from George Vithoulkas materia medica and his experiences. 330 different sources were also included.

**Features of Synthesis 9.1**

- Based on the famous work of Farokh Master's "clinical observations of children's remedies" more than 10,600 additions have been made.
- Remedies from the "Julian's Materia Medica of Nosodes" remedies have been added.
- All the information from the introduction part and the Mind section of Boericke's Materia Medica has been added. It is about 14,717 additions.
- The information of the remedies has also been increased. About 197 remedies contains more than 50% extra information when compared to the 8.1 version. The information added was based on additional author references.
- When compared to 9.0 version, 161 remedies contain 50% extra information.
- Reconstructing and streaming of rubrics have been done except in chapters mind and dream.
- The mind chapter starts with division of time like day time, morning and night.
- Three new chapters are added – neck, urinary organs and male and female sex/genitalia.
- The repertories of Boericke and phatak have been integrated into synthesis 9.
- New clinical information from Andre Saine (Canada) has been added.
- The information on magnets introduced by Boenninghausen but kept out of repertory by Allen and Kent has been added again.
- The repertory part of synthesis 9.1 counts 2090 pages.
- A 'down arrow' following a remedy indicates that this remedy is copied from a similar rubric.
- A black dot following a remedy indicates that remedy is added either because of a more recent or because of a lesser known author.
- Synthesis 9.1 has 2373 remedies, 1,066,987 remedy occurrences and 1,773,453 author occurrences.
- The number of annotated corrections has increased to 707.

**Merits**:

- Each remedy source is mentioned
- Constant update makes the repertory perfect day by day
- Rearrangement and creation of new rubrics made the search easy

- Remedy abbreviations has been corrected wherever needed.
- Maximum number of remedies is present in this repertory.
- Maximum number of reliable author sources,
- Modern American English is used with the help of Webster dictionary.
- New proving is being incorporated

**SOME OF THE RUBRICS RELATED TO THYROID GLAND:**

**From the chapter throat:**

1. THROAT, Choking, thyroid gland; from the enlargement of
2. THROAT, Inflammation, thyroid gland
3. THROAT, Tension, thyroid

**From the chapter – external throat**

1. EXTERNAL THROAT, Air passing up and down, sensation as if air were, thyroid and cervical glands in
2. EXTERNAL THROAT, Coldness, thyroid gland; in region of
3. EXTERNAL THROAT, Complaints of external throat, thyroid gland
4. EXTERNAL THROAT, Constriction, thyroid gland
5. EXTERNAL THROAT, Formication, thyroid gland
6. EXTERNAL THROAT, Heaviness, thyroid gland
7. EXTERNAL THROAT, Hyperthyroidism
8. EXTERNAL THROAT, Hypothyroidism
9. EXTERNAL THROAT, Inflammation thyroid gland
10. EXTERNAL THROAT, Lumps, thyroid gland
11. EXTERNAL THROAT, Pain, thyroid cartilage
12. EXTERNAL THROAT, Swelling, thyroid gland
13. EXTERNAL THROAT, Swelling, thyroid gland, puberty; at
14. EXTERNAL THROAT, Tenderness, thyroid gland
15. EXTERNAL THROAT, Tension, thyroid gland
16. EXTERNAL THROAT, thyroid gland, complaints of
17. EXTERNAL THROAT, thyroid gland, complaints of, accompanied by, cardiac complaints
18. EXTERNAL THROAT, thyroid gland, complaints of, accompanied by, obesity

19. EXTERNAL THROAT, thyroid gland, complaints of, respiration, asthmatic
20. EXTERNAL THROAT, Tumours, cystic, thyroid gland
21. EXTERNAL THROAT, Urging outward, thyroid gland

OTHER CHAPTERS

1. RECTUM, Diarrhoea, accompanied by, hyperthyroidism
2. LARYNX AND TRACHEA, Spasms, larynx, thyroid gland, from the enlargement of
3. RESPIRATION, Asthmatic, accompanied by, thyroid complaints of
4. COUGH, Cutting, stinging, thyroid gland in
5. COUGH, irritation, from; thyroid gland; in region of
6. CHEST, Heart; complaints of the thyroid glands, after overactivity of
7. CHEST, Heart failure, accompanied by hyperthyroidism
8. DREAMS, Hyperthyroidism having
9. DREAMS, Thyroid glands, enlarged
10. SKIN, Hair, falling out, hormonal causes from, thyroid gland
11. GENERALS, Diabetes mellitus, accompanied by hyperthyroidism

## MANAGEMENT OF HASHIMOTO'S THYROIDITIS USING SYNTHESIS REPERTORY

Synthesis repertory is a combination of many repertories possible and it has been the most favoured repertory among the practitioners. This repertory has many new remedies, information and rubrics. It is based on Kent's repertory and so it has the mental, physical and particular symptoms covered. Since it has a maximum amount of information, any type of case can be repertorized in this repertory based on the totality of symptoms. So I have chosen this repertory to find out its efficacy in treating Hashimoto's thyroiditis.

# 4. MATERIALS AND METHODS

**STUDY SETTING:**

30 sample cases were selected from the patients visiting SARADA KRISHNA HOMOEOPATHIC MEDICAL COLLEGE'S OPD, peripheral centres and IPD with the symptoms of Hashimoto's thyroiditis has been randomly taken for the study.

**SELECTION OF SAMPLES**:

- Sample Size - 30 cases
- Sampling Technique – Simple Random Sampling.

**METHODOLOGY:**

Random selection of 30 cases presenting with similar symptoms of hypothyroidism or Hashimoto's thyroiditis from the OPD, and peripheral centres of SARADA KRISHNA HOMOEOPATHIC MEDICAL COLLEGE was done. Detailed case taking is done and recorded in SKHMC standardized chronic case record format. Symptom analysis has been followed. Necessary laboratory investigations are done. Remedies have been prescribed based on the rubrics selected from the synthesis repertory. Follow up analysis, repetition, dosage has been done as per the directions of 5th and 6th edition of Organon of medicine. Follow up assessment was done in every month. Changes before and after has been subjected to statistical analysis and presented.

**DIAGNOSTIC CRITERIA**:

- Based on symptomatic clinical presentation of the patient.
- Preliminary confirmation criteria based on TSH and thyroid antibodies study.

**INCLUSION CRITERIA**:

- Female patients.
- Patients between 8 to 60 yrs of age
- Patients with elevated levels of thyroid antibodies.

**EXCLUSION CRITERIA:**

- Patients who have other severe systemic illnesses.
- Cases with other autoimmune diseases.
- Patients with malignant tumours and congenital hypothyroidism.

**STUDY DESIGN:**

- An experimental, single group study with before and after assessment. No control is used.
- This study was done in Sarada Krishna Homoeopathic Medical College & Hospital and rural centres of SKHMC.
- Collection of data was made according to pre-structured SKHMC chronic case format.
- Pre and post treatment analysis has been done using improvement criteria score.
- Case taking along with physical examination and required investigations was done.
- Cases were followed on a monthly basis and assessment of the scores was also done.
- Results has been subjected to statistical analysis and hypothesis were tested using paired‘t’ – test and Spearmann rank correlation coefficient.
- Rubrics present in the synthesis repertory are used in this study.

**INTERVENTION:**

- Case taking and medicine selection and administration according to homoeopathic principles.
- Pre and post treatment analysis was made on the basis of improvement criteria score.

**DURATION OF STUDY**

June 2019 to January 2021

**SELECTION OF TOOLS:**

- Repertorium Homoeopathicum Syntheticum **by** Dr.Frederik Schroyen
- Pre structured SKHMC case format.
- Assessment criteria for evaluating the prognosis of the cases.

**BRIEF OF PROCEDURES**:

- Detailed case taking and recording of problems in standardized chronic case record format.
- Clinical examination with finest investigations done.
- Investigation for TSH and thyroid antibodies was done.
- Assessment of Vitamin D was done.
- Reportorial totality according to Kent's repertory was taken and repertorization was done with synthesis repertory.
- Cases were prescribed with reference to standard text books of Materia Medica also.
- The selection of the potency and repetition of the dose was done according to the principles laid down in the Organon of medicine.
- Observations have been noted in tables and charts.
- Improvement in the patient is noted based upon the assessment criteria score.
- Pre-test and post-test assessment followed by statistical assessment of the result.

**OUTCOME ASSESSMENT:**

- Improvement criteria are fixed and patients with Hashimoto's thyroiditis were analysed based on it.
- Improvement in Vitamin D level.
- Improvement in physical generals.
- Pre intervention assessment was done and follow up assessment were done on monthly basis until symptom relief or for a period of 6 months or till follow up.

**DATA COLLECTION**:

- Interview technique including case taking based on the directions given in Organon of medicine in pre structured case format.

# 5. OBSERVATION AND RESULTS

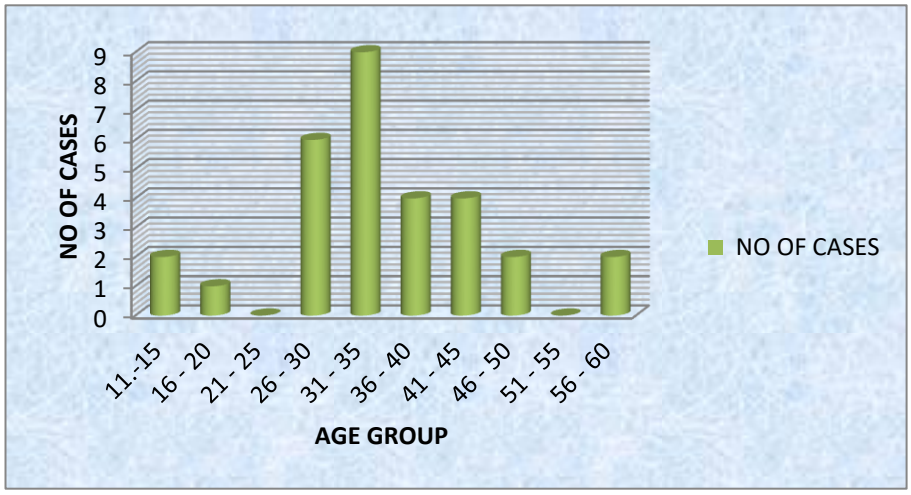
From the selected 30 cases who have attended the OPD, IPD and PHD of Sarada Krishna Homoeopathic Medical College, Kulasekharam, the interpretation of data has been done and presented in the form of tables, diagrams and charts under this section. The observations were made and the results of the analysis are presented through descriptive and interferential statistics.

## 5.1 DISTRIBUTION OF CASES ACCORING TO AGE GROUP

TABLE NO: 2

| AGE GROUP | NO OF CASES | PERCENTAGE |
|---|---|---|
| **11-15** | 2 | 6.66 |
| **16-20** | 1 | 3.33 |
| **21-25** | 0 | 0 |
| **26-30** | 6 | 20 |
| **31-35** | 9 | 30 |
| **36-40** | 4 | 13.33 |
| **41-45** | 4 | 13.33 |
| **46-50** | 2 | 6.66 |
| **51-55** | 0 | 0 |
| **56-60** | 2 | 6.66 |
| **TOTAL** | 30 | 100 |

FIGURE NO: 4




Findings: Among the 30 cases assigned for the study, maximum numbers of cases are under the age group of 31-35. Out of 30 cases, 9 cases come under this age group, which is 30% of the study group. The next higher age group is 26-30. It has 6 cases which constitutes for 20%.4 cases comes under the age group of 36-40 (13.33%), 4 cases under the age group of 41-45 (13.33%), 2 cases under the age group of 11-15 (6.66), 2 cases under the age group 46-50 (6.66), 2 cases under the age group of 56-60 (6.66), 1 cases

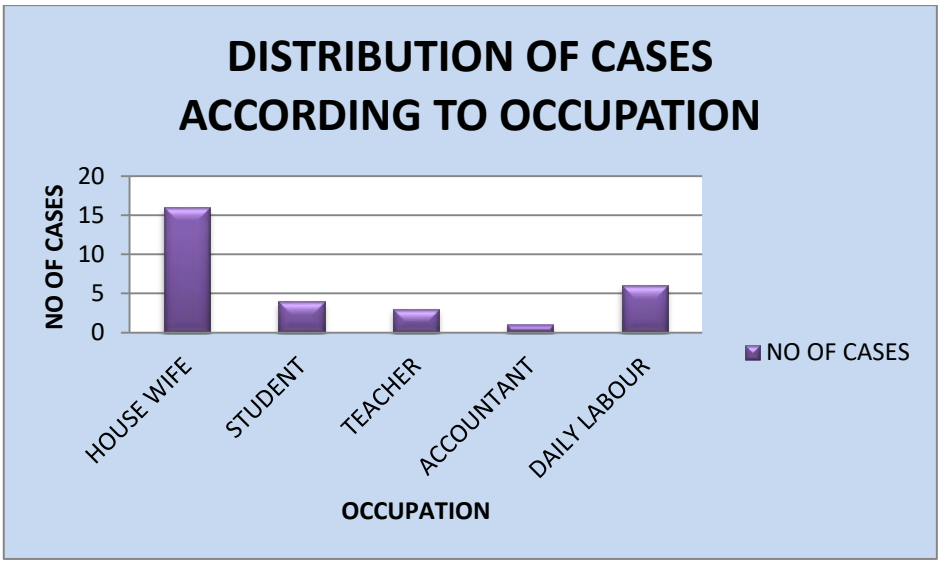
under the age group of 16-20 (3.33), 0 cases under the age group of 21-25 age group and 51-55 age group.

### 5.2 DISTRIBUTION OF CASES ACCORDING TO OCCUPATION

TABLE NO: 3

| OCCUPATION | NUMBER OF CASSES | PERCENTAGE |
|---|---|---|
| HOUSE WIFE | 16 | 53.33 |
| STUDENT | 4 | 13.33 |
| TEACHER | 3 | 10 |
| ACCOUNTANT | 1 | 3.33 |
| DAILY LABOUR | 6 | 20 |
| TOTAL | 30 | 100 |

FIGURE NO: 5



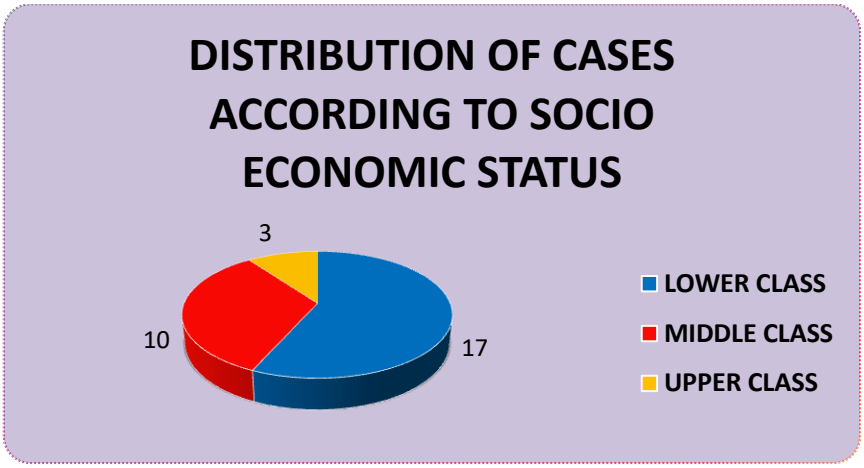

Findings: Out of 30 cases assigned for the study, 16 cases were housewives. It constitutes for 53.33%.Housewife are predominantly affected by Hashimoto's thyroiditis. Daily laborers are of 6 cases (20%), 4 cases of students (13.33%), 3 cases of teacher (10%) and 1 case of accountant (3.33%)

## 5.3 DISTRIBUTION OF CASES ACCORDING TO SOCIO ECONOMIC STATUS

TABLE NO: 4

| SOCIO ECONOMIC STATUS | NO OF CASES | PERCENTAGE |
|---|---|---|
| LOWER CLASS | 17 | 56.66 |
| MIDDLE CLASS | 10 | 33.33 |
| UPPER CLASS | 3 | 10 |
| TOTAL | 30 | 100 |

FIGURE NO: 6



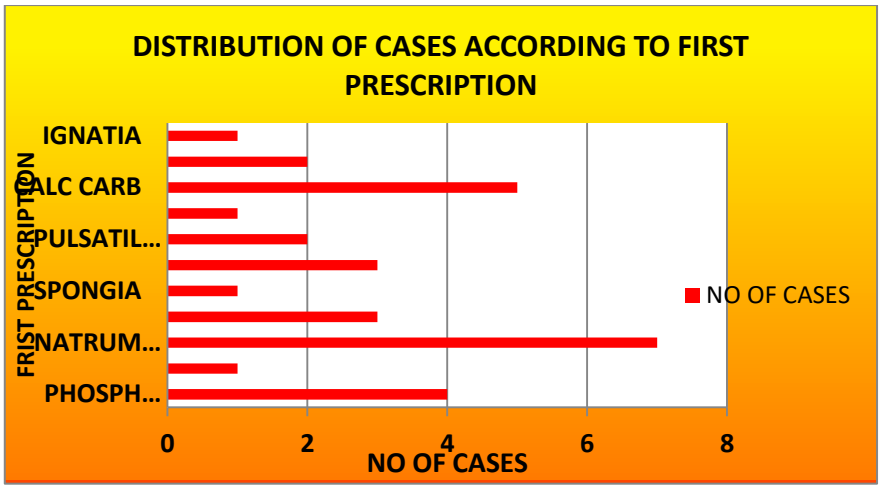

Findings: Out of the 30 assigned cases, 17 cases belong to low economic status. It constitutes for (56.66%). Lower class people are affected more. 10 cases belong to middle economic status (33.33%) and 3 cases belong to higher economic status (10%)

## 5.4 DISTRIBUTION OF CASES ACCORDING TO FIRST PRESCRIPTION

TABLE NO: 5

| MEDICINE | NO OF CASES | PRESCRIPTION |
|---|---|---|
| PHOSPHOROUS | 4 | 13.33 |
| SEPIA | 1 | 3.33 |
| NATRUM MUR | 7 | 23.33 |
| CALC IOD | 3 | 10 |
| SPONGIA | 1 | 3.33 |
| LYCOPODIUM | 3 | 10 |
| PULSATILLA | 2 | 6.66 |
| CAUSTICUM | 1 | 3.33 |
| CALC CARB | 5 | 16.66 |
| LACHESIS | 2 | 6,66 |
| IGNATIA | 1 | 3.33 |
| TOTAL | 30 | 100 |

FIGURE NO: 7



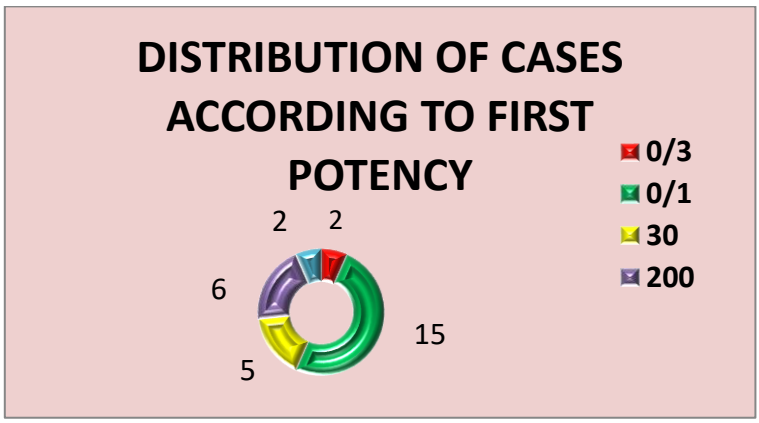

Findings: Repertorisation was done based on the rubrics of synthesis repertory. Out of the 30 cases assigned, for maximum number of cases, Natrum Muriaticum was given as the first prespription. It was given to 7 cases, which constitutes for 23.33%, for 5 cases Calcarea carbonica was given, constituting for 16.66%, phosphorous was given for 4 cases (13.33%), Calcarea iodata was given for 3 cases (10%), Lycopodium for 3 cases (10%), Lachesis for 2 cases (6.66%), Pulsatilla for 2 cases (6.66%) and Sepia, Spongia, Causticum and Ignatia was given to 1 cases each (3.33%).

## 5.5 DISTRIBUTION OF CASES ACCORDING TO FIRST POTENCY

TABLE NO: 6

| POTENCY | NO OF CASES | PERCENTAGE |
|---|---|---|
| **0/3** | 2 | 6.66 |
| **0/1** | 15 | 50 |
| **30** | 5 | 16.66 |
| **200** | 6 | 20 |
| **1M** | 2 | 6.66 |
| **TOTAL** | 30 | 100 |

FIGURE NO: 8



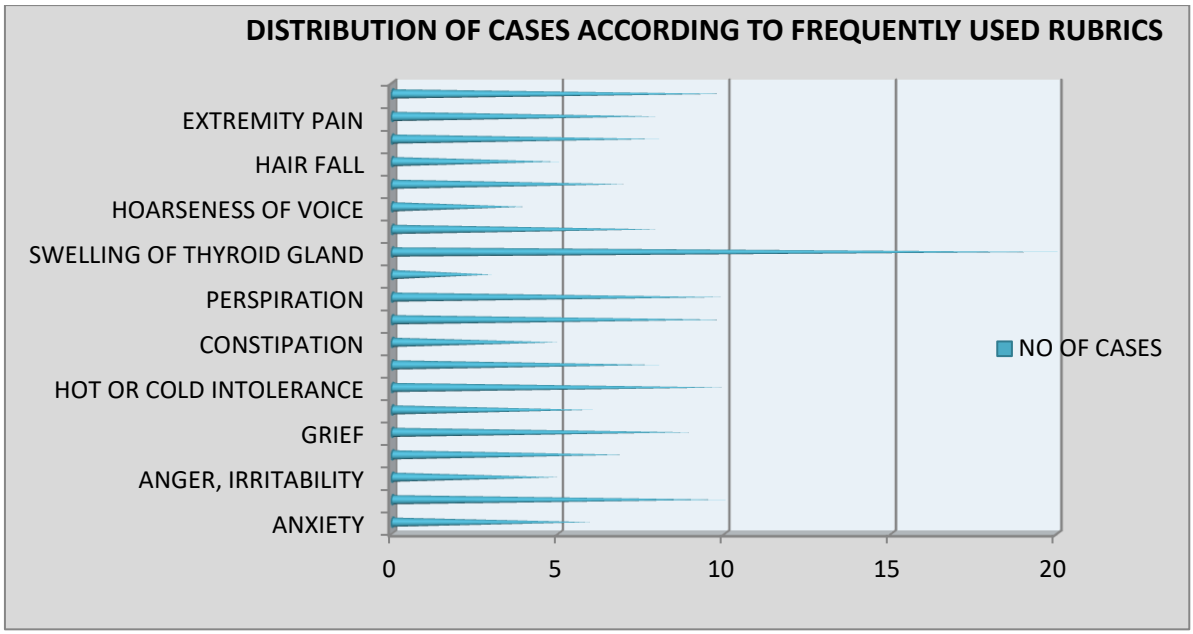
Findings: Out of the 30 cases assigned, for 15 cases 0/1 was the potency that was given. It constitutes for 50%. For 6 cases, 200$^{th}$ potency was given (20%), for 5 cases 30$^{th}$ potency was given (16.66%), for 2 cases 0/3 was given as the potency (6.66%) and for 2 cases 1M was given as the potency. 0/1 is the potency given for maximum number of cases.

## 5.6 DISTRIBUTION OF CASES ACCORDING TO FREQUENTLY USED RUBRICS

TABLE NO: 7

| RUBRICS | NO OF CASES | PERCENTAGE |
|---|---|---|
| ANXIETY | 6 | 20 |
| FEAR | 10 | 33.33 |
| ANGER, IRRITABILITY | 5 | 16.66 |
| WEEPING | 7 | 23.33 |
| GRIEF | 9 | 30 |
| COLD FOOD DESIRE | 6 | 20 |
| HOT OR COLD INTOLERANCE | 10 | 33.33 |
| APPETITE DIMINISHED | 8 | 26.66 |
| CONSTIPATION | 5 | 16.66 |
| MENSTRUAL IRREGULARITIES | 10 | 33.33 |
| LEUCORRHOEA | 3 | 10 |
| PERSPIRATION | 10 | 33.33 |
| SWELLING OF THYROID GLAND | 20 | 66.66 |
| SWALLOWING DIFFICULTY | 8 | 26.66 |
| HOARSENESS OF VOICE | 4 | 13.33 |
| PALPITATION | 7 | 23.33 |
| HAIRFALL | 5 | 16.66 |
| OBESITY | 8 | 26.66 |
| EXTREMITES PAIN | 8 | 26.66 |
| WEAKNESS | 10 | 33.33 |

FIGURE NO: 9



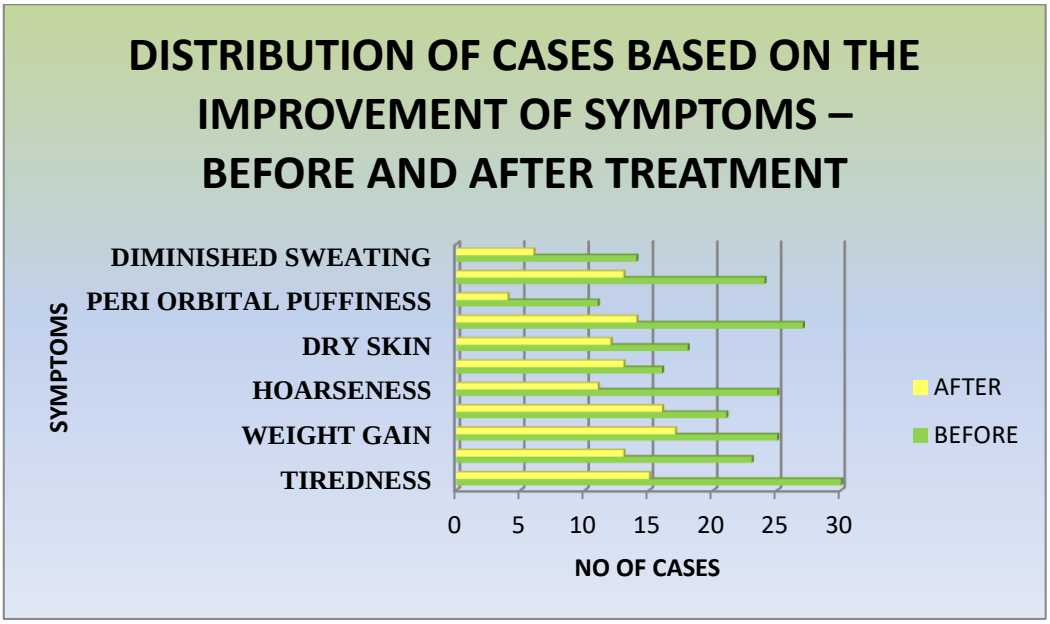

Findings: The repertorisation was done using synthesis repertory. The selection of the rubrics was done based on the totality and grading of the symptoms. Out of the 30 cases assigned, swelling of the thyroid gland was taken for repertorisation in 20 cases. It constituted for 66.66%.Rubrics related to fear was taken in 10 cases (33.33%), rubrics related to menstrual irregularities was taken in 10 cases (33.33%), rubrics for heat or cold intolerance was taken for 10 cases (33.33%) and rubrics related to weakness was taken in 10 cases (33.33%). Rubrics related to perspiration was taken in 10 cases (33.33%) Grief was taken for 9 cases (30%), appetite reduced, obesity and extremities pain rubrics were taken for 8 cases each (26.66%). Rubrics of weeping and palpitation was taken for 7 cases each (23.33%).rubric for desire for cold food was taken for 6 cases (20%).Rubric for anger or irritability, constipation and hair fall was taken for 5 cases each (16.66%).Hoarseness rubric was taken for 4 cases (13.33%) and rubric related to leucorrhoea was taken for 3 cases (10%).

## 5.7 DISTRIBUTION OF CASES BASED ON THE IMPROVEMENT OF SYMPTOMS – BEFORE AND AFTER TREATMENT

TABLE NO: 8

| SYMPTOMS | BEFORE | | AFTER | |
|---|---|---|---|---|
| | NO OF CASES | PERCENTAGE | NO OF CASES | PERCENTAGE |
| TIREDNESS | 30 | 100 | 15 | 50 |
| SLOW MOMENTS | 23 | 76.66 | 13 | 43.33 |
| WEIGHT GAIN | 25 | 83.33 | 17 | 56.66 |
| CONSTIPATION | 21 | 70 | 16 | 53.66 |
| HOARSENESS | 25 | 83.33 | 11 | 36.66 |
| COLD SKIN | 16 | 53.33 | 13 | 43.33 |
| DRY SKIN | 18 | 60 | 12 | 40 |
| COARSE SKIN | 27 | 90 | 14 | 46.66 |
| PERIORBITAL PUFFINESS | 11 | 36.66 | 4 | 13.33 |
| PARASTHESIA | 24 | 80 | 13 | 43.33 |
| DIMINISHED SWEATING | 14 | 46.66 | 6 | 20 |

FIGURE NO: 10



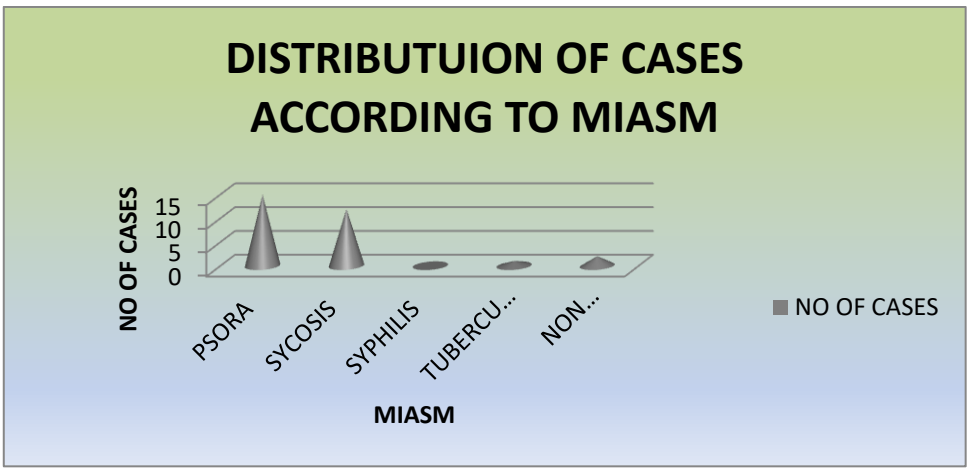
Findings: Out of the 30 assigned cases, 30 cases (100%) had tiredness before treatment. After the treatment only 15 cases (50%) had tiredness sensation. Tiredness was present in all the cases. There was improvement in other symptoms also. Coarse skin, which was present in 27 cases (90%), reduced to 14 cases (46.66%). Weight gain which was present in 25 cases (83.33%) reduced to 17 cases (56.66%). Hoarseness of voice, which was present in 25 cases, reduced to 11 cases (36.66%). Paresthesia, which was present in 24 cases (80%), reduced to 13 cases (43.33%). Slow movement which was present in 23 cases (76.66%), was reduced to 13 cases (43.33%).Constipation, which was present in 21 cases (70%), reduced to 16 cases (53.66%). Dry skin, which was present in 18 cases (60%), was reduced to 12 cases (40%). Cold skin, which was present in 16 cases (53.33%), was reduced to 13 cases (43.33%). Diminished sweating, which was present in 14 cases (46.66%), was reduced to 6 cases (20%). Periorbital puffiness which was present in 11 cases (36.66%), reduced to 4 cases (13.33).

### 5.8 DISTRIBUTUION OF CASES ACCORDING TO MIASM

TABLE NO: 9

| MIASM | NO OF CASES | PERCENTAGE |
|---|---|---|
| PSORA | 15 | 50 |
| SYCOSIS | 12 | 40 |
| SYPHILIS | 0 | 0 |
| TUBERCULAR | 1 | 3.33 |
| NON MIASMATIC | 2 | 6.66 |

FIGURE NO: 11



Findings: Out of the 30 cases assigned, maximum number of cases comes under the miasm psora. It includes 15 cases constituting for 50% of the cases. 12 cases comes under the miasm sycosis with 40%. 1 case (3.33%) comes under tubercular miasm and 2 cases (6.66%) are prescribed on a non-miasmatic basis. No case comes under syphilitic miasm.

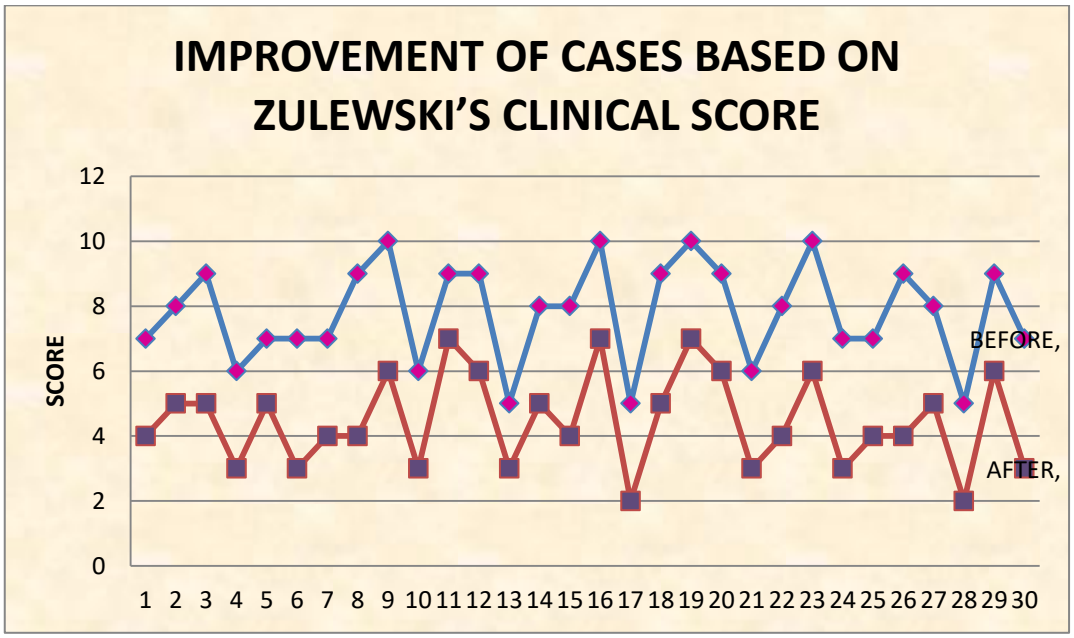
### 5.9 IMPROVEMENT OF CASES BASED ON ZULEWSKI'S SCORE

TABLE NO: 10

| CASE NO | BEFORE | AFTER | RESULT-IMPROVEMENT |
|---|---|---|---|
| **1** | 7 | 4 | MODERATE |
| **2** | 8 | 5 | MODERATE |
| **3** | 9 | 5 | MODERATE |
| **4** | 6 | 3 | MARKED |
| **5** | 7 | 5 | MODERATE |
| **6** | 7 | 3 | MARKED |
| **7** | 7 | 4 | MODERATE |
| **8** | 9 | 4 | MODERATE |
| **9** | 10 | 6 | MODERATE |
| **10** | 6 | 3 | MARKED |
| **11** | 9 | 7 | MILD |
| **12** | 9 | 6 | MODERATE |
| **13** | 5 | 3 | MARKED |
| **14** | 8 | 5 | MODERATE |
| **15** | 8 | 4 | MODERATE |
| **16** | 10 | 7 | MILD |
| **17** | 5 | 2 | MARKED |
| **18** | 9 | 5 | MODERATE |
| **19** | 10 | 7 | MILD |
| **20** | 9 | 6 | MODERATE |
| **21** | 6 | 3 | MARKED |
| **22** | 8 | 4 | MODERATE |
| **23** | 10 | 6 | MODERATE |

| | | | |
|---|---|---|---|
| **24** | 7 | 3 | MARKED |
| **25** | 7 | 4 | MODERATE |
| **26** | 9 | 4 | MODERATE |
| **27** | 8 | 5 | MODERATE |
| **28** | 5 | 2 | MARKED |
| **29** | 9 | 6 | MODERATE |
| **30** | 7 | 3 | MARKED |

FIGURE NO: 12




Findings: Out of 30 cases, before the treatment the range of the score was between 5 and 10. After treatment the range of score reduced to a range of 2-7. All the cases have shown improvement. After the treatment 2 cases (6.66%) had a score of 2; 7 cases (23.33%) has a score of 3; 7 cases (23.33%) had a score of 4; 6 cases (20%) had a score of 5; 5 cases (16.66%) had a score of 6 and 3 cases (10%) had a score of 7.

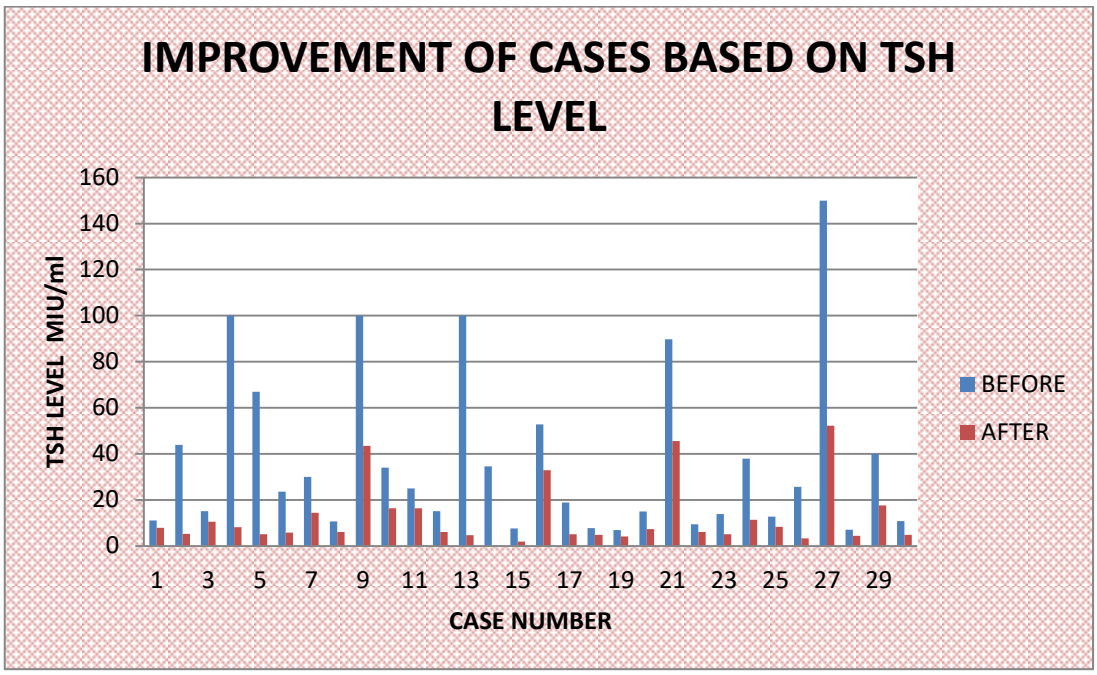
## 5.10 IMPROVEMENT OF CASES BASED ON TSH LEVEL

TABLE NO: 11

| CASE NO | BEFORE MIU/ml | AFTER MIU/ml |
|---|---|---|
| **1** | 11.02 | 7.83 |
| **2** | 43.9 | 5.17 |
| **3** | 15.08 | 10.52 |
| **4** | >100 | 8.17 |
| **5** | 67.0 | 5.03 |
| **6** | 23.58 | 5.77 |
| **7** | 29.91 | 14.38 |
| **8** | 10.61 | 6.03 |
| **9** | >100 | 43.5 |
| **10** | 33.93 | 16.33 |
| **11** | 24.92 | 16.32 |
| **12** | 15.10 | 6.04 |
| **13** | >100 | 4.64 |
| **14** | 34.6 | 0.05 |
| **15** | 7.61 | 1.94 |
| **16** | 52.70 | 32.85 |
| **17** | 18.78 | 5.02 |
| **18** | 7.78 | 4.85 |
| **19** | 6.82 | 4.16 |
| **20** | 14.90 | 7.32 |
| **21** | 89.7 | 45.6 |
| **22** | 9.40 | 6.03 |
| **23** | 13.8 | 5.10 |
| **24** | 37.9 | 11.4 |
| **25** | 12.67 | 8.22 |
| **26** | 25.6 | 3.23 |
| **27** | >150 | 52.18 |
| **28** | 6.96 | 4.32 |

| | | |
|---|---|---|
| **29** | 40.0 | 17.6 |
| **30** | 10.8 | 4.74 |

FIGURE NO: 13




Findings: Out of the 30 assigned cases, 3 cases (10%) had TSH level more than 100, and 1 case (3.33%) had TSH level more than 150. 1 case (3.33%) had TSH level between 8-100. 1 case (3.33%) had TSH level at the range of 60-80; 2 cases (6.66%) at the range of 40-60; 8 cases (26.66%) at the range of 20-40 and 14 cases (46.66%) at the range of 0 – 20. Every case has shown improvement after treatment. 3 cases (10%) was at a range of 40-60; 1 case (3.33%) was at a range of 20-40 ; 14 cases (46.66%) at a range of 5.6 – 10 and 12 cases (40%) had gone to the normal value i.e., 0.5 – 5.55.

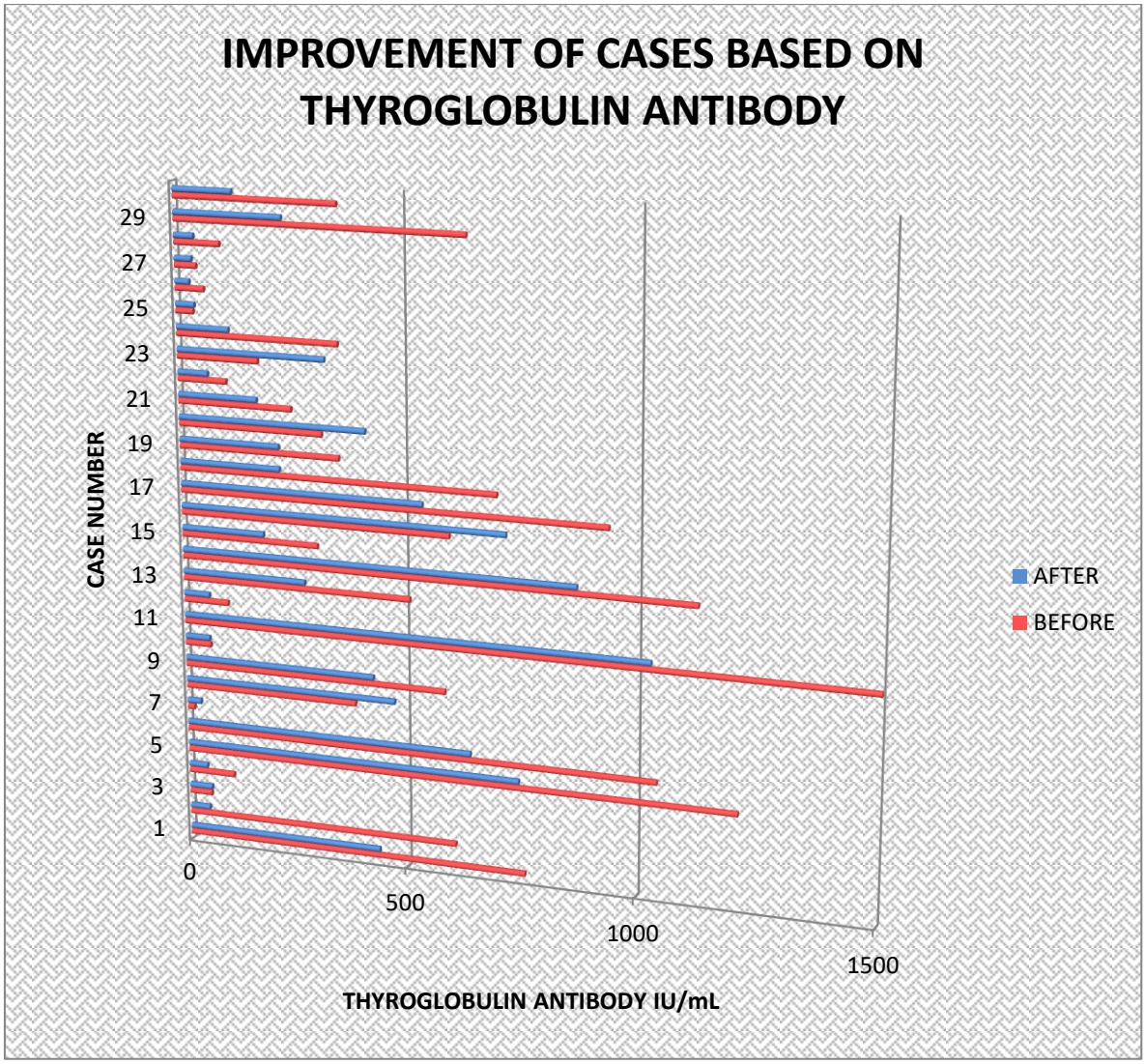
## 5.11 IMPROVEMENT OF CASES BASED ON THYROGLOBULIN ANTIBODY

TABLE NO: 12

| CASE NO | THYROGLOBULIN ANTIBODY IU/mL | | REDUCED/ INCREASED |
|---|---|---|---|
| | BEFORE | AFTER | |
| **1** | 760 | 436.80 | REDUCED |
| **2** | 607.70 | 44.23 | REDUCED |
| **3** | 49.69 | 50.77 | INCREASED |

| | | | |
|---|---|---|---|
| **4** | 103.5 | 41.05 | REDUCED |
| **5** | 1212.0 | 746.3 | REDUCED |
| **6** | 1042.0 | 641 | REDUCED |
| **7** | 14.89 | 30.08 | INCREASED |
| **8** | 386.3 | 474.3 | INCREASED |
| **9** | 586.3 | 427.20 | REDUCED |
| **10** | 57.00 | 54.89 | REDUCED |
| **11** | >1500 | 1028 | REDUCED |
| **12** | >100 | 56.87 | REDUCED |
| **13** | 510.7 | 276.4 | REDUCED |
| **14** | 1124.7 | 871.00 | REDUCED |
| **15** | 306.4 | 184.8 | REDUCED |
| **16** | 597.9 | 720.04 | INCREASED |
| **17** | 938 | 540 | REDUCED |
| **18** | 700.9 | 224.64 | REDUCED |
| **19** | 357.7 | 223.6 | REDUCED |
| **20** | 320.4 | 416.3 | INCREASED |
| **21** | 253.2 | 176.3 | REDUCED |
| **22** | 108.54 | 67.32 | REDUCED |
| **23** | 181.10 | 328.6 | INCREASED |
| **24** | 358.9 | 116.7 | REDUCED |
| **25** | 38.6 | 41.5 | INCREASED |
| **26** | 63.7 | 31.4 | REDUCED |
| **27** | 48.03 | 37.9 | REDUCED |
| **28** | 101.4 | 43.2 | REDUCED |
| **29** | 638.5 | 239.7 | REDUCED |
| **30** | 361.1 | 131.2 | REDUCED |

FIGURE NO: 14




Findings : Out of the 30 assigned cases, maximum number of cases have improved. In 23 cases (76.66%), the level of thyroglobulin antibody has reduced. In 7 cases (23.33%), the level of thyroglobulin antibody has increased slightly.

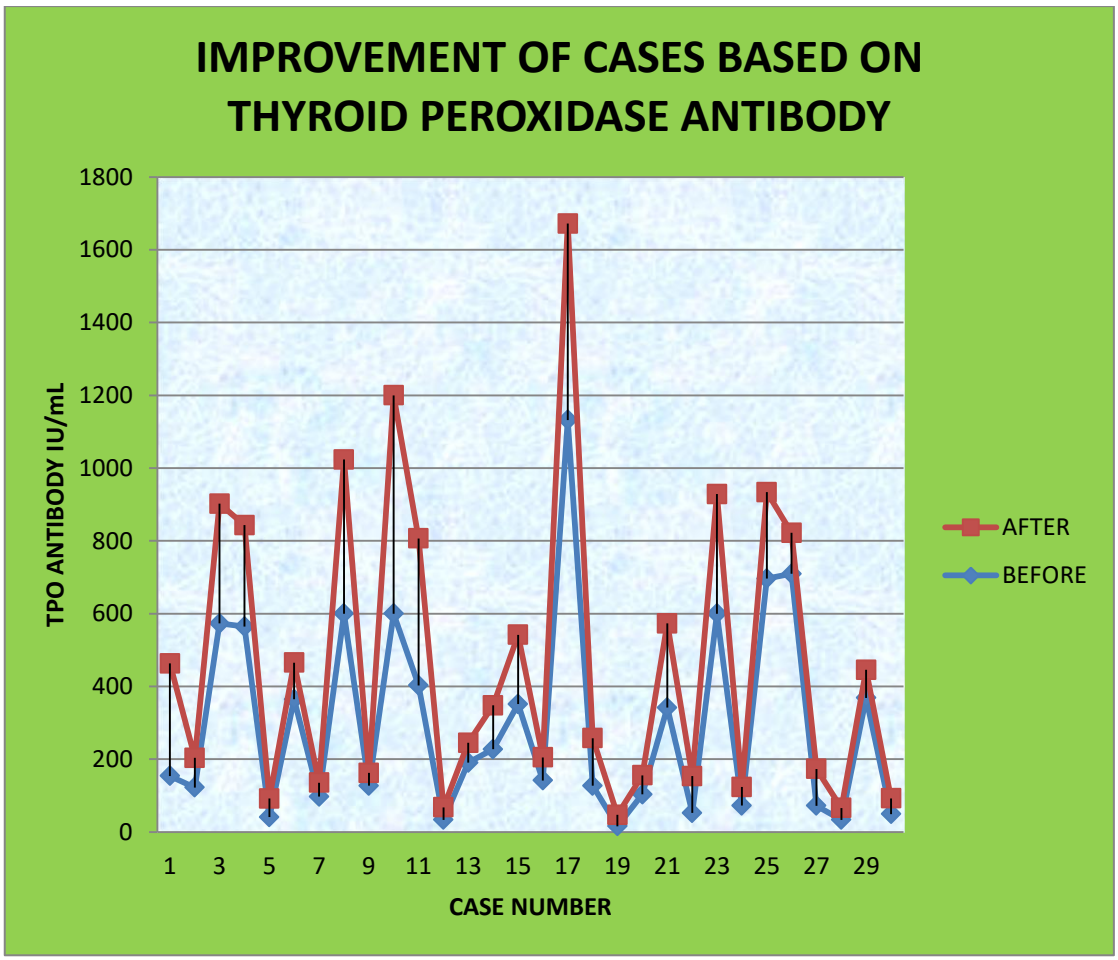
## 5.12 IMPROVEMENT OF CASES BASED ON THYROID PEROXIDASE ANTIBODY

TABLE NO: 13

| CASE NO | THYROID PEROXIDASE ANTIBODY IU/mL | | REDUCED/ INCREASED- |
|---|---|---|---|
| | BEFORE | AFTER | |
| **1** | 154 | 309 | INCREASED |
| **2** | 121.90 | 81.70 | REDUCED |
| **3** | 573.10 | 329.0 | REDUCED |
| **4** | 564.1 | 279.0 | REDUCED |
| **5** | 40.76 | 51.03 | INCREASED |
| **6** | 364.7 | 100.5 | REDUCED |
| **7** | 97.04 | 38.26 | REDUCED |
| **8** | >600 | 423.7 | REDUCED |
| **9** | 127 | 35.25 | REDUCED |
| **10** | >600 | 600 | REDUCED |
| **11** | 402.70 | 404 | INCREASED |
| **12** | 33.08 | 34.5 | INCREASED |
| **13** | 190.3 | 54.6 | REDUCED |
| **14** | 227.3 | 120.70 | REDUCED |
| **15** | 351.4 | 190.3 | REDUCED |
| **16** | 141.3 | 63.4 | REDUCED |
| **17** | 1132 | 540 | REDUCED |
| **18** | 126.8 | 130.62 | INCREASED |
| **19** | 15.52 | 31.5 | REDUCED |
| **20** | 103.4 | 52.0 | REDUCED |
| **21** | 341.7 | 231.3 | REDUCED |
| **22** | 52 | 101.2 | INCREASED |
| **23** | >600 | 328.6 | REDUCED |
| **24** | 72.2 | 51.2 | REDUCED |
| **25** | 696.3 | 237.7 | REDUCED |
| **26** | 709.4 | 112.7 | REDUCED |

| | | | |
|---|---|---|---|
| **27** | 72.15 | 101.1 | INCREASED |
| **28** | 33.35 | 32.5 | REDUCED |
| **29** | 368.5 | 76.9 | REDUCED |
| **30** | 49.04 | 43.1 | REDUCED |

FIGURE NO: 15




Findings: Out of the 30 assigned cases, thyroid peroxidase antibody has reduced in a maximum numer of cases. In certain cases where thyroglobulin antibody has reduced, thyroid peroxidase antibody has increased. In certain cases, where thyroid peroxidase is reduced, thyroglobulin antibody levels seem to increase. 23 cases (76.66%) of cases show improvement in the level of thyroid peroxidase antibody and in 7 cases (23.33%), thyroid peroxidase antibody level has increased after the treatment.

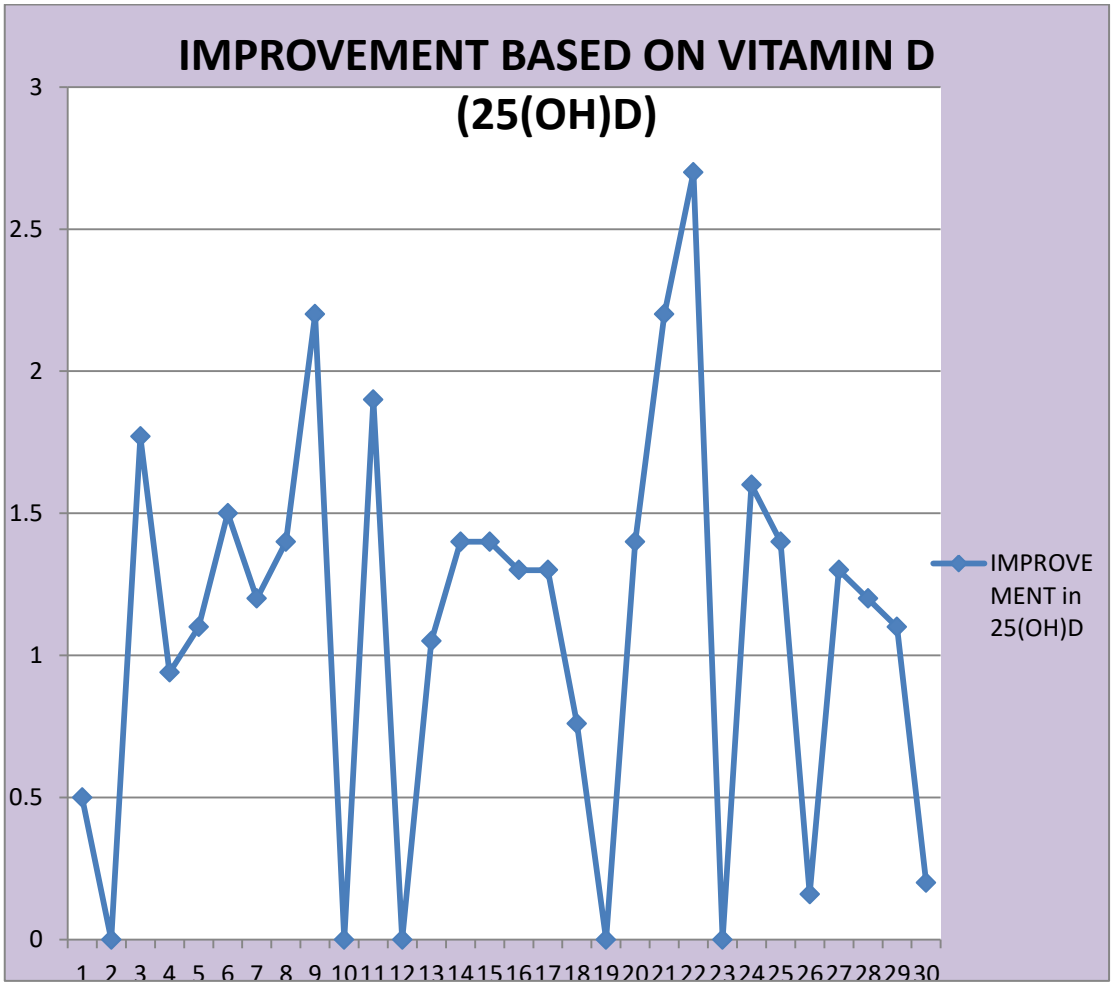
## 5.13 IMPROVEMENT BASED ON VITAMIN D (25(OH)D)

TABLE NO: 14

| CASE NO | VITAMIN D (25(OH)D) ng/ml | | IMPROVEMENT ng/ml |
|---|---|---|---|
| | BEFORE | AFTER | |
| **1** | 30.2 | 30.7 | 0.5 |
| **2** | 16.42 | 15.59 | Reduced by 1.17 |
| **3** | 23.23 | 25.0 | 1.77 |
| **4** | 24 | 24.94 | 0.94 |
| **5** | 23.7 | 24.8 | 1.10 |
| **6** | 18.6 | 20.1 | 1.5 |
| **7** | 13.3 | 14.5 | 1.2 |
| **8** | 22.7 | 24.1 | 1.4 |
| **9** | 19.6 | 21.8 | 2.2 |
| **10** | 17.3 | 16.5 | Reduced by 0.8 |
| **11** | 12.6 | 14.5 | 1.9 |
| **12** | 19.23 | 19.0 | Reduced by 0.23 |
| **13** | 12.75 | 13.8 | 1.05 |
| **14** | 25.4 | 26.8 | 1.4 |
| **15** | 17.4 | 16 | Reduced by 1.4 |
| **16** | 22.7 | 24 | 1.3 |
| **17** | 27.6 | 28.9 | 1.3 |
| **18** | 16.54 | 17.3 | 0.76 |
| **19** | 21.3 | 21.0 | Reduced by 0.3 |
| **20** | 17.9 | 19.3 | 1.4 |
| **21** | 31.5 | 33.7 | 2.2 |
| **22** | 19.3 | 22 | 2.7 |
| **23** | 20.7 | 19.6 | Reduced by 1.1 |
| **24** | 16.3 | 17.9 | 1.6 |
| **25** | 18.2 | 19.6 | 1.4 |
| **26** | 17.34 | 17.5 | 0.16 |
| **27** | 20.1 | 21.4 | 1.3 |

| | | | |
|---|---|---|---|
| **28** | 15.7 | 16.9 | 1.2 |
| **29** | 23.4 | 24.5 | 1.1 |
| **30** | 19.3 | 19.5 | 0.2 |

FIGURE NO: 16



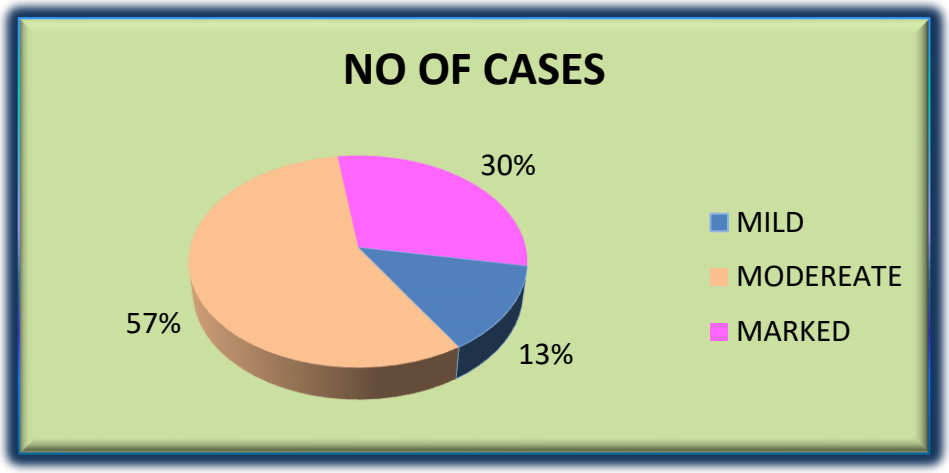

Findings: Out of the 30 cases assigned 24 cases (80%) showed improvement in the level of Vitamin D. In 6 cases (20%), there was slight reduction in the level of Vitamin D. among the improved cases, 3 cases (10%) has a very slight improvement between the range of 0-0.5ng/ml. 2 cases (6.66%) have shown an improvement at a range of 0.6-1ng/dl. 14 cases (46.66%) shows an improvement at a range of 1.1-1.5 ng/ml. 3 cases (10%) shows an improvement at a range of 1.6-2ng/ml. 2 cases (6.66%) shows an improvement at the range of 2.1 – 2.5 ng/ml. 1 case (3.33%) shows an improvement at the range of 2.6-3 ng/ml.

## 5.14 DISTRIBUTION OF CASES ACCORDING TO IMPROVEMENT

TABLE NO: 15

| LEVEL OF IMPROVEMENT | NO OF CASES | PERCENTAGE |
|---|---|---|
| **MILD IMPROVEMENT** | 4 | 13.33 |
| **MODERATE IMPROVEMENT** | 17 | 56.66 |
| **MARKED IMPROVEMENT** | 9 | 30 |

FIGURE NO: 17




Findings: Out of the 30 assigned cases, 4 cases (13.33%) shows mild improvement, 17 cases (56.66 %) shows moderate improvement and 9 cases (30%) shows marked improvement.

# 6. STATISTICAL ANALYSIS

## STATISTICAL ANALYSIS FOR ZULEWSKI'S SCORE

## TABLE NO: 16

| SL. NO | X | Y | $d$=X-Y | $d-\bar{d}$ | $(d-\bar{d})^2$ |
|---|---|---|---|---|---|
| 1 | 7 | 4 | -3 | 0.33 | 0.1089 |
| 2 | 8 | 5 | -3 | 0.33 | 0.1089 |
| 3 | 9 | 5 | -4 | 0.67 | 0.4489 |
| 4 | 6 | 3 | -3 | 0.33 | 0.1089 |
| 5 | 7 | 5 | -2 | 1.33 | 1.7686 |
| 6 | 7 | 3 | -4 | 0.67 | 0.4489 |
| 7 | 7 | 4 | -3 | 0.33 | 0.1089 |
| 8 | 9 | 4 | -5 | 1.67 | 2.7889 |
| 9 | 10 | 6 | -4 | 0.67 | 0.4489 |
| 10 | 6 | 3 | -3 | 0.33 | 0.1089 |
| 11 | 9 | 7 | -2 | 1.33 | 1.7686 |
| 12 | 9 | 6 | -3 | 0.33 | 0.1089 |
| 13 | 5 | 3 | -2 | 1.33 | 1.7686 |
| 14 | 8 | 5 | -3 | 0.33 | 0.1089 |
| 15 | 8 | 4 | -4 | 0.67 | 0.4489 |
| 16 | 10 | 7 | -3 | 0.33 | 0.1089 |
| 17 | 5 | 2 | -3 | 0.33 | 0.1089 |
| 18 | 9 | 5 | -4 | 0.67 | 0.4489 |
| 19 | 10 | 7 | -3 | 0.33 | 0.1089 |
| 20 | 9 | 6 | -3 | 0.33 | 0.1089 |
| 21 | 6 | 3 | -3 | 0.33 | 0.1089 |
| 22 | 8 | 4 | -4 | 0.67 | 0.4489 |
| 23 | 10 | 6 | -4 | 0.67 | 0.4489 |
| 24 | 7 | 3 | -4 | 0.67 | 0.4489 |
| 25 | 7 | 4 | -3 | 0.33 | 0.1089 |
| 26 | 9 | 4 | -5 | 1.67 | 2.7889 |
| 27 | 8 | 5 | -3 | 0.33 | 0.1089 |
| 28 | 5 | 2 | -3 | 0.33 | 0.1089 |
| 29 | 9 | 6 | -3 | 0.33 | 0.1089 |
| 30 | 7 | 3 | -4 | 0.67 | 0.4489 |
| TOTAL | | | **$\Sigma d$ =-100** | | **$\Sigma(d-\bar{d})^2$ =16.67** |

STATISTICAL ANALYSIS

**X**= Score before treatment

**Y**= Score after treatment

***d***= Mean difference

## A. Question to be answered:

Whether rubrics of Synthesis Repertory are effective in suggesting a simillimum for treatment of cases with Hashimoto's thyroiditis?

## B. Null Hypothesis:

Rubrics of Synthesis Repertory are not effective in finding a simillimum for cases of Hashimotos thyroiditis.

## C. Standard error of the mean differences

The mean of difference, $\bar{d}$ = Σd /n =- 3.33

The estimate of population standard deviation is given by,

$S.D = \sqrt{\Sigma(d-\bar{d})^2 / (n-1)}$

$= \sqrt{16.67/29}$

$= \sqrt{0.574}$

$SD^2 = 0.574$

SD = 0.75

Standard error (S.E) = $\sqrt{S.D^2/n}$

$= 0.75/\sqrt{30}$

$= 0.75/5.4$

$=0.138$

4. Critical ratio, $t = \frac{\bar{d}}{S.D/\sqrt{n}}$

= -3.33/0.75/√30

=-3.33/0.75/5.4 = 3.33/0.138

= -24.1304

## PAIRED "T" TEST RESULTS

### TABLE NO : 17

| t-Test: Paired Two Sample for Means | | |
|---|---|---|
| | X | Y |
| | *Variable 1* | *Variable 2* |
| Mean | 7.8 | 4.466666667 |
| Variance | 2.372413793 | 2.11954023 |
| Observations | 30 | 30 |
| Pearson Correlation | 0.873442431 | |
| Hypothesized Mean Difference | 0 | |
| Df | 29 | |
| t Stat | 24.08318916 | |
| P(T<=t) one-tail | 5.05458E-21 | |
| t Critical one-tail | 1.699127027 | |
| P(T<=t) two-tail | 1.01092E-20 | |
| t Critical two-tail | 2.045229642 | |

The value of 't' is - 24.0831. The value of p is < 0.00001. The result is significant at $p \leq 0.05$.

### D. Comparison with tabled value:

This critical ratio, t follows a distribution with n-1 degrees of freedom. The 5% level is 2.045 and 1% level is 2.756 for 29 degrees of freedom. Since the calculated value -24.13 is greater than tabled value at 5% and 1% level, the test is statistically significant and hence the null hypothesis is rejected.

### E. . Inference:

This study provides an evidence to show that there is significant reduction in the intensity of Hashimoto's thyroiditis after administering homoeopathy remedies. Hence, we conclude that homoeopathic treatment of Hashimoto's thyroiditis using synthesis repertory is effective.

**STATISTICAL ANALYSIS FOR VITAMIN D**

## TABLE NO: 18

| SL. NO | $X$ | Y | $d$=X-Y | $d-\bar{d}$ | $(d-\bar{d})^2$ |
|---|---|---|---|---|---|
| 1 | 30.2 | 30.7 | 0.5 | -0.4 | 0.16 |
| 2 | 16.42 | 15.59 | -0.83 | -1.73 | 2.98 |
| 3 | 23.23 | 25.0 | 1.77 | 0.87 | 0.76 |
| 4 | 24 | 24.94 | 0.94 | 0.04 | 0.00 |
| 5 | 23.7 | 24.8 | 1.1 | 0.2 | 0.04 |
| 6 | 18.6 | 20.1 | 1.5 | 0.6 | 0.36 |
| 7 | 13.3 | 14.5 | 1.2 | 0.3 | 0.09 |
| 8 | 22.7 | 24.1 | 1.4 | 0.5 | 0.25 |
| 9 | 19.6 | 21.8 | 2.2 | 1.3 | 1.7 |
| 10 | 17.3 | 16.5 | -0.8 | -1.7 | 2.88 |
| 11 | 12.6 | 14.5 | 1.9 | 1 | 1.01 |
| 12 | 19.23 | 19.0 | -0.23 | -1.13 | 1.27 |
| 13 | 12.75 | 13.8 | 1.05 | 0.15 | 0.02 |
| 14 | 25.4 | 26.8 | 1.4 | 0.5 | 0.25 |
| 15 | 17.4 | 16 | -1.4 | -2.3 | 5.28 |
| 16 | 22.7 | 24 | 1.3 | 0.4 | 0.16 |
| 17 | 27.6 | 28.9 | 1.3 | 0.4 | 0.16 |
| 18 | 16.54 | 17.3 | 0.76 | -0.14 | 0.02 |
| 19 | 21.3 | 21.0 | -0.3 | -1.2 | 1.43 |
| 20 | 17.9 | 19.3 | 1.4 | 0.05 | 0.25 |
| 21 | 31.5 | 33.7 | 2.2 | 1.3 | 1.7 |
| 22 | 19.3 | 22 | 2.7 | 1.8 | 3.24 |
| 23 | 20.7 | 19.6 | -1.1 | -2 | 4 |
| 24 | 16.3 | 17.9 | 1.6 | 0.7 | 0.49 |
| 25 | 18.2 | 19.6 | 1.4 | 0.5 | 0.25 |
| 26 | 17.34 | 17.5 | 0.16 | -0.74 | 0.55 |
| 27 | 20.1 | 21.4 | 1.3 | 0.4 | 0.16 |
| 28 | 15.7 | 16.9 | 1.2 | 0.3 | 0.09 |
| 29 | 23.4 | 24.5 | 1.1 | 0.2 | 0.04 |
| 30 | 19.3 | 19.5 | 0.2 | -0.7 | 0.49 |
| TOTAL | | | $\Sigma d$ = 26.92 | | $\Sigma(d-\bar{d})^2$ = 30.08 |

STATISTICAL ANALYSIS

**X**= Vitamin D before treatment

**Y**= Vitamin D after treatment

***d***= Mean difference

## A. Question to be answered:

Whether homoeopathic treatment is effective in improving the levels of Vitamin D in an individual?

## B. Null Hypothesis:

Homoeopathic treatment is not effective in improving the levels of Vitamin D in an individual.

## C. Standard error of the mean differences

The mean of difference, $\bar{d}$ = Σd /n = 26.92/30 = 0.9

The estimate of population standard deviation is given by,

S.D = $\sqrt{\Sigma(d-\bar{d})^2 / (n-1)}$

= $\sqrt{30.08/29}$

= $\sqrt{1.037}$

$SD^2$ = 1.037

SD =1.018

Standard error (S.E) = $\sqrt{S.D^2/n}$

= 1.02/$\sqrt{30}$

= 1.02/5.48 = 0.186

4. Critical ratio, $t = \frac{\bar{d}}{S.D/\sqrt{n}}$

= 0.9/0.186

= 4.83

## PAIRED "T" TEST RESULTS

### TABLE NO : 19

| t-Test: Paired Two Sample for Means | | |
|---|---|---|
| | X | Y |
| | *Variable 1* | *Variable 2* |
| Mean | 20.14367 | 21.041 |
| Variance | 21.81699 | 24.38246 |
| Observations | 30 | 30 |
| Pearson Correlation | 0.979046 | |
| Hypothesized Mean Difference | 0 | |
| Df | 29 | |
| t Stat | -4.824432 | |
| P(T<=t) one-tail | 2.07E-05 | |
| t Critical one-tail | 1.699127 | |
| P(T<=t) two-tail | 4.13E-05 | |
| t Critical two-tail | 2.04523 | |

The value of 't'- is 4.8253. The value of p is < 0.00004. The result is significant at $p \leq 0.05$.

D. **Comparison with tabled value:**

This critical ratio, t follows a distribution with n-1 degrees of freedom. The 5% level is 2.045 and 1% level is 2.756 for 29 degrees of freedom. Since the calculated value 4.825 is greater than tabled value at 5% and 1% level, the test is statistically significant and hence the null hypothesis is rejected.

E. **. Inference**:

This study provides an evidence to show that there is improvement in the levels of Vitamin D among individuals after the administration of Homoeopathic remedies. Hence, we conclude that homoeopathic treatment in improving the levels of Vitamin D is effective.

## STATISTICAL ANALYSIS TO SHOW THE RELATION BETWEEN ZULEWSKI SCORE AND VITAMIN D

**TABLE NO: 20**

| CASE NUMBER | VITAMIN D RANK $X_{Ra}$ | $X_{Ra}$-$M_x$ | ZULEWSKI SCORE RANK $Y_{Ra}$ | $Y_{Ra}$-$M_y$ | SUM DIFFERENCE ($X_{Ra}$-$M_{x)*(}$ $X_{Ra}$-$M_{x)}$ |
|---|---|---|---|---|---|
| 1 | 29 | 13.50 | 10 | -5.50 | -74.25 |
| 2 | 6 | -9.50 | 16 | 0.50 | -4.75 |
| 3 | 23 | 7.50 | 22.5 | 7.00 | 52.50 |
| 4 | 26 | 10.50 | 5 | -10.50 | -110.25 |
| 5 | 25 | 9.50 | 10 | -5.50 | -52.25 |
| 6 | 13 | -2.50 | 10 | -5.50 | 13.75 |
| 7 | 3 | -12.50 | 10 | -5.50 | 68.75 |
| 8 | 21 | 6.00 | 22.5 | 7.00 | 42.00 |
| 9 | 17 | 1.50 | 28.5 | 13.00 | 19.50 |
| 10 | 8 | -7.50 | 5 | -10.50 | 78.75 |
| 11 | 1 | -14.50 | 22.5 | 7.00 | -101.50 |
| 12 | 14 | -1.50 | 22.5 | 7.00 | -10.50 |
| 13 | 2 | -13.50 | 2 | -13.50 | 182.25 |
| 14 | 27 | 11.50 | 16 | 0.50 | 5.75 |
| 15 | 10 | -5.50 | 16 | 0.50 | -2.75 |
| 16 | 21 | 6.00 | 28.5 | 13.00 | 78.00 |
| 17 | 28 | 12.50 | 2 | -13.50 | -168.75 |
| 18 | 7 | -8.50 | 22.5 | 7.00 | -59.50 |
| 19 | 20 | 4.50 | 28.5 | 13.00 | 58.50 |
| 20 | 11 | -4.50 | 22.5 | 7.00 | -31.50 |
| 21 | 30 | 14.50 | 5 | -10.50 | -152.25 |
| 22 | 15 | 0.00 | 16 | 0.50 | 0.00 |
| 23 | 19 | 3.50 | 28.5 | 13.00 | 45.50 |
| 24 | 5 | -10.50 | 10 | -5.50 | 57.75 |
| 25 | 12 | -3.50 | 10 | -5.50 | 19.25 |
| 26 | 9 | -6.50 | 22.5 | 7.00 | -45.50 |
| 27 | 18 | 2.50 | 16 | 0.50 | 1.25 |
| 28 | 4 | -11.50 | 2 | -13.50 | 155.25 |
| 29 | 24 | 8.50 | 22.5 | 7.00 | 59.50 |
| 30 | 15 | 0.00 | 10 | -5.50 | 0.00 |

Spearman rank correlation coefficient is used to correlate the relation between Zulewski's clinical score and levels of Vitamin D before treatment to see the role of Vitamin D in Hashimoto's thyroiditis.

A. **Question to be answered**:

Whether the levels of Vitamin D has any direct relation with the severity of Hashimoto's thyroiditis

## B. Null hypothesis:

The level of Vitamin D does not have any direct relation with the severity of Haashimoto's thyroiditis.

C. **Calculation**:

D. Spearman rank correlation coefficient:

$$r_s = \rho_{\mathrm{rg}_X,\mathrm{rg}_Y} = \frac{\mathrm{cov}(\mathrm{rg}_X, \mathrm{rg}_Y)}{\sigma_{\mathrm{rg}_X}\sigma_{\mathrm{rg}_Y}},$$

p = spearman's rank correlation coefficient

cov ($rg_X$,$rg_Y$) = covariance of rank variables

$\sigma_{\mathrm{rg}_X}\sigma_{\mathrm{rg}_Y}$

= standard deviations of the rank variables.

Mean value of X ranks = 15.5
Standard deviation$^2$= 2246.5/29 = 77.46551
Standard deviation = 8.801
Mean value of Y ranks = 15.5
Standard deviation$^2$= 2158.5/29 = 74.431
Standard deviation = 8.627
Covariance = 124.5/29 = 4.29

$r_s$= 4.29/ (8.8*8.63)

= 0.05654
=0.057

The coefficient value, 0.057 is almost equal to 0. p (2-tailed)= 0.76666. This shows that in this study population, there is no correlation between the levels of Vitamin D and Zulewski clinical score. Thus null hypothesis is accepted.

E. **Inference**:

This study shows that, in this study population of 30 cases the levels of Vitamin D do not have any relation with the severity disease condition, Hashimoto's thyroiditis.

# 7. DISCUSSION

This study was conducted with an aim to assess the role of Vitamin D deficiency in Hashimoto's thyroiditis and also to assess the efficacy of synthesis repertory in the treatment of the same. Literature and research states that Vit D deficiency is present in 30 - 90% of the population regardless of age, sex, climate and latitude. HT is an autoimmune disease for which the exact cause has not been found out. Treating an autoimmune disease as such is very difficult and bringing about complete cure in the patient is not possible according to other literatures. But in this study, we are able to see moderate to marked improvement in cases of HT by repertorizing with synthesis repertory. And also, this study shows that almost all cases of Hashimoto's thyroiditis are deficient in Vit D.

The study was conducted on 30 cases from OPD, IPD and PHC of Sarada Krishna Homoeopathic Medical College on the basis of simple random sampling. Cases were selected after the diagnostic confirmation by increase in the level of Thyroid Stimulating Hormone (TSH) and thyroid antibodies (TgAb and TPO) in blood. The cases were selected between the age group of 8-60. The medicine was selected after detailed case taking careful observation. The prescription was made after proper repertorisation and individualization. The cases were followed for a period of 6 months to 1 year. The improvements in the cases were assigned using the Zulewski score before and after the treatment. The analysis of the study was compared with paired "t" test.

Given below are the findings observed from my studies. This has been correlated with the previous researches.

## 1. ACCORDING TO AGE GROUP

The study population included the age group of 8 -60. According to this study, a maximum of 9 cases (30%) are under the age group of 31-35. The next higher age group is 26-30. It has 6 cases which constitutes for 20%. By this study, we can observe that 15 cases come under the age group of 26-35, which concludes Hashimoto's thyroiditis is mostly seen in young adulthood.

A previous study "Prevalence of hypothyroidism in adults: An epidemiological study in eight cities of India" by Ambikka Gopalakrisnan, Sanjay Karla, Ganapathi Bantwal, Mathew John and Neeraj Tewari states that, when comparing the older and younger,

(13.11% Vs 7.53%) diagnosed to have hypothyroidism.430 patients (8.02%) were identified to have subclinical hypothyroidism. Anti-TPO antibodies suggesting autoimmunity were detected in 21.85% (n=1171) patient..[41]

## 2. ACCORDING TO OCCUPATION

Out of 30 cases assigned for the study, 16 cases were housewives. It constitutes for 53.33%.Housewife are predominantly affected by Hashimoto's thyroiditis. Daily laborers are of 6 cases (20%), 4 cases of students (13.33%), 3 cases of teacher (10%) and 1 case of accountant (3.33%).

A clinical study on "Antimiasmatic Treatment of patients with Hypothyroidism" GR Shinee, Saradha Krishna Homoeopathic Medical College, Kulasekharam, 2018 reveals that 56.66% of the cases were females. [42]

Housewives are more prone to mental stress and being at home they do not have an outlet to share their emotions and stress. Thus my study also shows that housewives are affected more when compared to other group of occupations.

## 3. ACCORDING TO SOCIO ECONOMIC STATUS

According to this study, 17 cases belong to low economic status. It constitutes for (56.66%). Lower class people are affected more. 10 cases belong to middle economic status (33.33%) and 3 cases belong to higher economic status (10%).

A research paper on "Hypothyroidism in context: Where we've been and Where we're going" by Luca Chiovata, Flvia Magri and Allan Carle states the people with in poor socio economic status shows evidence of more number of cases of hypothyroidism because they maintain a poor quality of life.[43] Many cases are left undiagnosed unless they go for a complicated impact.

## 4. ACCORDING TO THE FIRST PRESCRIPTION

Repertorisation was done based on the rubrics of synthesis repertory. In maximum number of cases 7 cases (23.33% ) Natrum Muriaticum was given as the first prescription. For 5 cases (16.66%) Calcarea carbonica was given, phosphorous was given for 4 cases (13.33%), Calcarea iodata was given for 3 cases (10%), Lycopodium for 3 cases (10%),

Lachesis for 2 cases (6.66%), Pulsatilla for 2 cases (6.66%) and Sepia, Spongia, Causticum and Ignatia was given to 1 cases each (3.33%).

In a research paper "Efficacy of homeopathic intervention in subclinical hypothyroidism with or without autoimmune thyroiditis in children: an exploratory randomized control study" by Vijay K Chauhan, Raj K Manchanda, Archana Narang, Raman K Marwaha, Saurav Arora, Latika Nagpal, Surrender K Verma and V Sreenivas, for 86 cases, 15 homoeopathic remedies were prescribed. The commonly prescribed medicines were Natrum Mur (20), Phosphorous (16), Calcarea carb (16), Pulsatilla (8), Calcarea Sulph (5) and Sulphur (4). Naturm Mur was the medicine given to maximum number of cases.[44]

Also, in a publication "Effectiveness of Natrum Muriaticum 1M on reduction of TSH level in females between age group 35 to 55 years", Dr.Sathish Kumar has proved that Natrum Muriaticum is very effective in the management of hypothyroidism.[10]

All these studies reveal that, Natrum Muriaticum, Calcarea Carbonicum, Phosphorous are the most common medicine effective in the treatment of HT.

### 5. ACCORDING TO FIRST POTENCY

In this study, for 15 cases 0/1 was the potency given. It constitutes for 50%. For 6 cases (20%), $200^{th}$ potency was given, for 5 cases $30^{th}$ potency was given (16.66%), for 2 cases 0/3 was given (6.66%) and for 2 cases (6.66%) 1M was given as the potency. 0/1 is the potency given for maximum number of cases. It concludes that for 17 cases (56.66%), LM potency was prescribed.

According to the study "A clinical study on the management of Hypothyroidism in females using LM potency" by Mohan Amritha, Sarada Krishna Homoeopathic Medical College, Kulasekharam, when LM potency was given to 30 cases of Hypothyroidism selected randomly, all the cases showed marked improvement.[45] This study supports the result that LM potency is effective in treating thyroid disorders.

### 6. ACCORDING TO FREQUENTLY USED RUBRICS

The repertorisation was done using synthesis repertory. The selection of the rubrics was done based on the totality and grading of the symptoms. Out of the 30 cases assigned, swelling of the thyroid gland was taken for repertorisation in 20 cases. It constituted for 66.66%.Rubrics related to fear in 10 cases (33.33%), menstrual

irregularities in 10 cases (33.33%), for heat or cold intolerance in 10 cases (33.33%), weakness in 10 cases (33.33%), perspiration in 10 cases (33.33%). Grief was taken for 9 cases (30%), appetite reduced, obesity and extremities pain rubrics were taken for 8 cases each (26.66%). Rubrics for weeping and palpitation were taken for 7 cases each (23.33%). Rubric for desire for cold food was taken for 6 cases (20%).Rubric for anger or irritability, constipation and hair fall was taken for 5 cases each (16.66%).Hoarseness rubric was taken for 4 cases (13.33%) and rubric related to leucorrhoea was taken for 3 cases (10%).

The rubrics like Fear, grief, weeping, anger and irritability are taken for much number of cases.

According to an article, "Anxiety, depression, attention and executive functions in hypothyroidism" by EL Constant, Stephane Adam, Xavier Seron in Journal of Inyernational Neuropsychological Society, verifies that patients having hypothyroidism had were anxious and depressive when compared to the control group.(46)

An article "A psychiatric study of hypothyroidism" by VK Jain, in American Psychological Association also supports the study. In the study 30 consecutive patients with hypothyroidism were examined. According to this study, 10 cases were anxious, 13 were depressed, 2 had paranoid ideas, 2 were hallucinated and 8 were confused.(47)

The functions of the thyroid gland are slow during stress. The triiodothyronine (T3) and thyroxine (T4) levels fall during stress. The conversion of T4 to T3 does not occur properly leading to increase in the level of reverse T3.(48) Psychology plays a very important role in thyroid disorders.

## 7. ACCORDING TO THE PRESENTING SYMPTOMS

Out of the 30 assigned cases, 30 cases (100%) had tiredness before treatment. After the treatment only 15 cases (50%) had tiredness sensation. Coarse skin was present in 27 cases (90%), weight gain in 25 cases (83.33%). hoarseness of voice in 25 cases (83.33%), paresthesia in 24 cases (80%), slow movement in 23 cases (76.66%), constipation in 21 cases (70%), dry skin in 18 cases (60%), cold skin, in 16 cases (53.33%), diminished sweating, in 14 cases (46.66%), periorbital puffiness in 11 cases (36.66%).

Hashimoto's thyroiditis is an autoimmune disease with subclinical hypothyroidism. So the presentation of symptoms is mostly like that of hypothyroidism. A study "Clinical profile of hypothyroid dysfunction in elderly: An overview" by Harish Kumar, Veer Bahadur Singh in the Department of Medicine, S P Medical College, Bikaner, and North-Western

Rajasthan of 225 cases which states that, Weakness is the most common symptom of thyroid dysfunction 123 cases (70%), constipation 112 cases (62%), hoarseness of voice 89 cases (54%) and cold skin 79 cases (51%) [49]

Hereby tiredness, weakness, hoarseness, weight gain and coarse skin are verified to be the most common symptoms of Hashimoto's thyroiditis.

## 8. ACCORDING TO MIASM

Out of the 30 cases assigned, maximum number of cases comes under the miasm psora. It includes 15 cases constituting for 50% of the cases. 12 cases come under the miasm sycosis with 40%. 1 case (3.33%) comes under tubercular miasm and 2 cases (6.66%) are prescribed on a non-miasmatic basis. No case comes under syphilitic miasm.

According to clinical study on "Antimiasmatic Treatment of patients with Hypothyroidism" by GR Shinee, Saradha Krishna Homoeopathic Medical College, Kulasekharam, the past history of acute diseases has led to the awakening of slumbering Psora. Out of 30 cases 36.6% of cases were sycotic, 26.66% of cases were psoric sycotic. [42].According to Aphorism 80, "The monstrous internal chronic miasm - the psora is the only real fundamental cause and producer of all other numerous, innumerable forms of disease which seems to be like independent diseases.[50] Thus my study also proves the wordings of Dr.Samuel Hahnemann that Psora is the fundamental cause for chronic disease. [51]

## 9. ZULEWSKI'S PRE AND POST TREATMENT SCORE

In this study, before the treatment the range of the score was between 5 and 10. After treatment the score reduced to a range of 2-7. All the cases have shown improvement. After the treatment 2 cases (6.66%) had a score of 2; 7 cases (23.33%) has a score of 3; 7 cases (23.33%) had a score of 4; 6 cases (20%) had a score of 5; 5 cases (16.66%) had a score of 6 and 3 cases (10%) had a score of 7.

According to an article "Estimation of tissue hypothyroidism by a new clinical score: evaluation of patients with various grades of hypothyroidism and controls" by Henryk Zulewski, Beat Muller, Pascale Exer, Andre R Miserez, Jean- Jacques Staub in The journal of clinical Endocrinology & metabolism, evaluation of symptoms and signs of

hypothyroidism with Zulewski's clinical score in addition to thyroid function testing is very useful in monitoring thyroid functions and treating them.[52]

Thus, by comparing the pre and post treatment score in Zulewski's clinical score, we can observe the prescribed homoeopathic remedies treat Hashimoto's thyroiditis cases efficiently.

## 10. IMPROVEMENT IN TSH LEVEL – PRE AND POST TREATMENT

All the cases have shown improvement when treated using synthesis repertory. Before the treatment, 3 cases (10%) had TSH level more than 100, and 1 case (3.33%) had TSH level more than 150. 1 case (3.33%) had TSH level between 8-100. 1 case (3.33%) had TSH level at the range of 60-80; 2 cases (6.66%) at the range of 40-60; 8 cases (26.66%) at the range of 20-40 and 14 cases (46.66%) at the range of 0 – 20. After the treatment, 3 cases (10%) was at a range of 40-60; 1 case (3.33%) was at a range of 20-40; 14 cases (46.66%) at a range of 5.6 – 10 and 12 cases (40%) had gone to the normal value i.e., 0.5 – 5.55.

In a research paper "Efficacy of homeopathic intervention in subclinical hypothyroidism with or without autoimmune thyroiditis in children: an exploratory randomized control study" by Vijay K Chauhan, Raj K Manchanda, Archana Narang, Raman K Marwaha, Saurav Arora, Latika Nagpal, Surrender K Verma and V Sreenivas, the author has proved that, TSH levels returned to normal limits in 84.94% of patients. [44]

Correlating with the above study, my study proves the effectiveness of Homoeopathic treatment in reducing the level of TSH in patients with Hashimoto's thyroiditis after repertorizing with synthesis repertory.

## 11. IMPROVEMENT IN THYROID ANTIBODIES

Out of the 30 cases, maximum number of cases has improved. In 23 cases (76.66%), the level of thyroglobulin antibody has reduced. In 7 cases (23.33%), the level of thyroglobulin antibody has increased slightly.

When seeing the level of thyroid peroxidase antibody, 23 cases (76.66%) of cases show improvement in the level of thyroid peroxidase antibody and in 7 cases (23.33%), thyroid peroxidase antibody level has increased after the treatment.

In the article, "Homoeopathy for Anti-thyroid Peroxidase Antibody titer in Hashimoto's thyroiditis – a clinical study" by V Sathish Kumar, P.S,Priyanka, C.M.Chandrahasen, K.R.Reshmy and G.S.Deepa, in Annals of the Romanian Society foe Cell Biology, have proved that individualized homoeopathic medicine is effective in reducing the level of anti-TPO Ab titer in the treatment of HT. (11)

In a case report, "Case report on Hashimoto's thyroiditis and homoeopathy" by RS Krishneswari has mentioned that, in a case reported in Endocrine OPD of National Homeopathy Research Institute in Mental Health, Kottayam, homoeopathic medicine has helped to reduce the level of thyroid antibodies. (53)

But in certain cases it has been noted that, when thyroglobulin antibody level reduces, thyroid peroxidase antibody increases and vice versa. The exact reason for this variation remains unknown.

With the results of this study we can see that individualized homoeopathic remedy helps to reduce the values of Anti-thyroglobulin antibody and Anti-thyroid peroxidase antibody in Hashimoto's thyroiditis patients.

## 12. LEVEL OF VITAMIN D – PRE AND POST TREATMENT.

In this study, only homoeopathic remedy was prescribed and no additional synthetic form of Vitamin D was added. Out of the 30 cases, in 24 cases (80%) showed improvement in the level of Vitamin D. In 6 cases (20%) there was slight reduction in the level of Vitamin D. Among the improved cases, 3 cases (10%) has a very slight improvement between the range of 0-0.5ng/ml. 2 cases (6.66%) have shown an improvement at a range of 0.6-1ng/dl. 14 cases (46.66%) shows an improvement at a range of 1.1-1.5 ng/ml. 3 cases (10%) shows an improvement at a range of 1.6-2ng/ml. 2 cases (6.66%) shows an improvement at the range of 2.1 – 2.5 ng/ml. 1 case (3.33%) shows an improvement at the range of 2.6-3 ng/ml.When Vitamin D was tested before treatment, 28 (94.33%) cases out of 30 cases were deficient in Vitamin D. 2 cases (6.66%) had normal values of Vitamin D.

A case control study "Relative vitamin D insufficiency in Hashimoto's thyroiditis" by Gonca Tamer. Safiye Arik, Ismet Tamer and Darla Coksert included 161 cases with Hashimoto's thyroiditis and 162 healthy controls. According to this study in 148 cases, (92%) of Hasimoto's thyroiditis had insufficiency of Vitamin D and only 63% of control group (healthy persons) had Vitamin D insufficiency. (54)

Correlating with this study, it can be stated that Vitamin D is one of the important risk factor for Hashimoto's thyroiditis or in other words it can also be said that most of people with Hashimoto's thyroiditis have Vitamin D deficiency. It is not clear whether Vitamin D deficiency is a factor in the pathogenesis of Hashimoto's thyroiditis or it is a consequence of the disease. And also, with the results of my study it can be seen that after taking homoeopathic treatment, the Vitamin D level have increased at a range of 0.5 – 2.7ng/dl in 24 cases(80%), after taking treatment for a period of 6 months to 1 year.

**RESULTS:**

My study concludes that before the treatment 28 cases showed deficiency of Vitamin D proving that Vitamin D is a risk factor for HT. After treatment 24 cases shows mild improvement in Vitamin D and 6 cases show slight reduction in Vitamin D. And also considering Hashimoto's thyroiditis, 4 cases (13.33%) shows mild improvement, 17 cases (56.66 %) shows moderate improvement and 9 cases (30%) shows marked improvement with the intervention of homoeopathic medicine after repertorizing with synthesis repertory. This was statistically interpreted and a marked reduction was seen in the post test scores when compared to pre-test scores.

# 8. LIMITATIONS

1. Only 30 cases have been used in this study. So generalization of the results and inferences of the study must be done cautiously.
2. The time of duration for the follow up was 6 months – 1 year which is a limited period of time.
3. Due to the Covid -19 situation and lockdown, it was difficult to follow the cases and take proper investigation at the right time. There was no proper transport facility for the patients and the follow up were taken by different physicians.
4. Doing investigations in many of the cases in regular intervals was difficult. Some of them even dropped out from the study during the treatment.
5. There was no control group since the sample size was small.
6. There were no enough standard studies to compare or take guidance from a study of this kind in homoeopathy especially in Hashimoto's thyroidits. Therefore some human errors are expected.
7. Certain patients were unwilling to do the Vitamin D test and thyroid antibodies test even six months after the relief of the symptoms.
8. Due to the Covid -19 and quarantine situations, certain patients did not get a proper exposure to sunlight, compared to the normal exposure they used to get before. So, proper assessment of the pre and post levels of 25- hydroxyl vitamin D was difficult.

**RECOMMENDATIONS:**

1. Bigger sample size with extended time of research would provide be better.
2. It will be always scientific if control (placebo) group would have been kept simultaneously to verify the effectiveness of treatment.
3. Universal standardized scale can be used for proper outcome of evaluation.
4. Further study at a larger scale would help to know the cause for Hashimoto's thyroiditis. And also large survey related study is essential to know if Vit D is one of the factor for pathogenesis of Hashimoto's thyroiditis or deficiency of Vitamin D is a result of HT.

# 9. CONCLUSION

1. Hashimoto's thyroiditis is an autoimmune disease and it is more prevalent among the age group of 31-35 years (30%) and is followed by the age group of 26-30 years (20%).
2. Females are more prominently affected, especially housewives (53.33%). The people belonging to the low socio-economic status (56.66%), are at a high risk of getting affected.
3. Natrum Muriaticum when given as the prescription treats many cases (23.33%) and it is indicated to be the first grade remedy for Hashimoto's thyroiditis. It is followed by Calcarea Carbonica (16.66%), which becomes the second grade remedy and phosphorous (13.33%), becomes the third grade remedy in the treatment of Hashimoto's thyroiditis.
4. The potency that is widely used is the LM potency (56.66%) which gives marked improvement and its potency are raised whenever necessary based on the improvement.
5. The commonly presented symptoms of Hashimoto's thyroiditis are tiredness (100%), coarse skin (90%), and weight gain (83.33%), hoarseness of voice (83.33%), paraesthesia (80%), slow movement (76.66%) and constipation (70%).
6. The rubrics from the synthesis repertory that were frequently selected for repertorisation were fear (33.33%), menstrual irregularities (33.33%), intolerance to heat and cold (33.33%), weakness (33.33%), perspiration (33.33%) and swelling of the thyroid gland (20%). The major mind rubrics that were covered are fear, grief, weeping, anger and irritability.
7. Psora is the miasm that lies as the basic fundamental miasm for majority of the cases of Hashimoto's thyroiditis (50%). It is followed by sycotic miasm which covers about 12 cases (40%).
8. After treatment with homoeopathic medicine, there has been moderate to marked improvement in the Zulewski's score in 27 cases (90%).
9. The effectiveness of the Homoeopathic medicines is proved with the reducing level of TSH hormone in all the 30 cases (100%).
10. There is reduction in the levels of thyroid antibodies in 23 cases (76.66%). In certain cases, it can be noticed that, when the thyroglobulin antibody level

increases, there is raise in the level of Anti-thyroid peroxidase antibody and vice versa for which the reason remains unknown.

11. Vitamin D deficiency is present in 28 cases (94.33%) and it is one of the risk factor for Hashimoto's thyroiditis. Vitamin D deficiency can also be the consequence of Hashimoto's thyroiditis.

12. Statistical analysis shows marked improvement in post test scores when compared to pre test scores. The calculated t-value is -24.0831. The value of p is < 0.00001. The result is significant at $p \leq 0.05$.

13. Among the 30 cases, 24 cases (80%) shows mild improvement in the levels of Vitamin D after homoeopathic treatment and 6 cases (20%) shows a reduction in the levels of Vitamin D. Statistical analysis showed mild improvement in pre and post value of Vitamin D. The calculated t-value 4.8253. The value of p is <0.00001. The result is significant at $p \leq 0.05$.
14. The statistical relationship between Vitamin D level and severity of the disease was assessed using spearman rank correlation coefficient. The coefficient value, $r_s$=0.057. p (2-tailed)= 0.76666. This proves that there is no correlation between the Vitamin D value and severity of HT.
15. Among 30 cases under study, 9 cases (30%) shows marked improvement, 17 cases (56.66%) shows moderate improvement & 4 cases (13.33%) showed mild improvement.
16. This study shows that homoeopathic similimum selected according to Hahnemannian principles using rubrics from Synthesis Repertory by Dr.Frederick Schroyens is effective in the treatment of Hashimoto's thyroiditis and improving the levels of Vitamin D.

# 10. SUMMARY

Vitamin D deficiency is present in almost all the individuals. The need of Vitamin D is felt by every organ in the body and proper functioning of thyroid gland also needs a little amount of Vitamin D. Vitamin D also plays a major role in maintaining the proper function of immune system. Hashimoto's thyroiditis is an autoimmune disease where the body fails to recognise their own cells.

In modern medicine, Vitamin D is given as a synthetic material dose to improve the Vitamin D in an individual and also there are no medications for autoimmune diseases. But in homoeopathy, we have a good scope in managing such diseases. It also boosts the immune level to prevent the reoccurrence of the disease. My study on Vitamin D deficiency and managing Hashimoto's thyroiditis using synthesis repertory proved that Vitamin D deficiency is a major risk factor for Hashimoto's thyroiditis and also the efficacy of homoeopathy in the management of Auto immune diseases.

Nowadays Hashimoto's thyroiditis has become a most common clinical condition among the females. It eventually reduces the quality of life. The common modern medicines prescribed are thyronorm, levothyroxine to relieve the symptoms of hypothyroidism and to lower the TSH levels. But they have side effects and finally end in surgery.

With individualised Homoeopathic prescription, the health of the individual is restored. Synthesis repertory is a widely used repertory at bed side which contains many different rubrics which suits all types of cases. The similimum derived with the rubrics of this repertory are useful in managing the cases of Hashimoto's thyroiditis.

A total number of 30 cases were randomly selected from IPD and OPD of Sarada Krishna Homoeopathic Medical College & Hospital. The cases were selected on basis of inclusion and exclusion criteria. The cases were followed for a minimum period of six months. The cases were analysed based on Zulewski scoring criteria given. The calculated t-value is -24.0831 based on the improvement of Zulewski score. The value of p is $< 0.00001$. The result is significant at $p \leq 0.05$.

The Hashimoto's thyroiditis is more predominantly seen in age group of 31-35 years (30%) and is followed by the age group of 26-30 years (20%) which included housewives of 16 cases (53.33%). Most of the cases belonged to low socio-economic status (56.66%).

These people commonly undergo mental stress which includes fear, anger, irritability and grief.

Symptoms like tiredness (100%), coarse skin (90%), weight gain (83.33%), hoarseness of voice (83.33%), paraesthesia (80%), slow movement (76.66%) and constipation (70%) are commonly present in Hashimoto's thyroiditis. The first grade remedy that was most frequently used is Natrum Muriaticum (23.33%). The second and the third grade remedy used were Calcarea Carbonica (16.66%) and Phosphorous (13.33%) respectively. The widely used potency was the LM potency in 17 cases (56.66%).

In the selected 30 cases, 28 cases (93.33%) were deficient in Vitamin D before treatment and after the treatment Vitamin D level has increased in 24 cases (80%) and Vitamin D level has reduced in 6 cases (20%). When statistically analysed based on the improvement of Vitamin D pre and post treatment, the value of 't' is 4.8253. The value of p is < 0.00001. The result is significant at $p \leq 0.05$.

The statistical relationship between Vitamin D level and severity of the disease was assessed using spearman rank correlation coefficient. The coefficient value, $r_s$=0.057. p (2-tailed)= 0.76666. This proves that there is no correlation between the Vitamin D value and severity of HT.

Among 30 cases under study, 9 cases (30%) shows marked improvement, 17 cases (56.66%) shows moderate improvement & 4 cases (13.33%) mild improvement.

So finally it has been proven that Vitamin D deficiency is one of the major risk factor for Hashimoto's thyroiditis and there is no relation between the value of Vitamin D and severity of HT. Homoeopathic simillimum selected according to Hahnemannian principles using the rubrics from Synthesis Repertory by Dr. Frederick Schroyens is effective in the treatment of Hashimoto's thyroiditis and improving the levels of Vitamin D.

# BIBLIOGRAPHY


1. Johari A, Mehta B, Priyanka. Vitamin D deficiency in India. Ann Biol [Internet]. 2015 Mar 1 [cited 2021 Apr 5];31(1):157–60. Available from: /pmc/articles/PMC6060930/

2. Evliyaoğlu O, Acar M, Özcabı B, Erginöz E, Bucak F, Ercan O, et al. Vitamin D Deficiency and Hashimoto's Thyroiditis in Children and Adolescents: a Critical Vitamin D Level for This Association? J Clin Res Pediatr Endocrinol [Internet]. 2015 Jun [cited 2019 Sep 25];7(2):128–33. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26316435

3. Vitamin D - Anthony Norman - Google Books [Internet]. [cited 2021 Mar 29]. Available from: https://books.google.co.in/books?hl=en&lr=&id=Z8Y1QQTnQFEC&oi=fnd&pg=PP1&dq=what+is+vitamin+d&ots=gzkSrOutQq&sig=l4RkAVLGl0bl28Y8hllnEmB8ri8&redir_esc=y#v=onepage&q=what is vitamin d&f=false

4. Tiwari P. Essentitlas of Repertorisation. Fourth Edi. Tiwari PDSK, editor. B.JAIN PUBLISHERS (P) LTD; 2006. 463 p.

5. Calcium I of M (US) C to RDRI for VD and, Ross AC, Taylor CL, Yaktine AL, Valle HB Del. Dietary Reference Intakes for Calcium and Vitamin D [Internet]. Dietary Reference Intakes for Calcium and Vitamin D. National Academies Press (US); 2011 [cited 2019 Apr 20]. Available from: http://www.ncbi.nlm.nih.gov/pubmed/21796828

6. Muscogiuri G, Tirabassi G, Bizzaro G, Orio F, Paschou SA, Vryonidou A, et al. Vitamin D and thyroid disease: to D or not to D? Eur J Clin Nutr [Internet]. 2015 Mar 17 [cited 2019 Apr 20];69(3):291–6. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25514898

7. Not so sunny? Vitamin D deficiency high in Chennai [Internet]. [cited 2021 Mar 27]. Available from: https://www.deccanchronicle.com/lifestyle/health-and-wellbeing/110417/not-so-sunny-vitamin-d-deficiency-high-in-chennai.html

8. Unnikrishnan AG, Menon U V. Thyroid disorders in India: An epidemiological

perspective. Indian J Endocrinol Metab [Internet]. 2011 Jul [cited 2019 Apr 20];15(Suppl 2):S78-81. Available from: http://www.ncbi.nlm.nih.gov/pubmed/21966658

9. Masilamani D, Arasan D, Pyarejan K, Venkatasamy S, Kalyanasundaram K, Jeganathan S, et al. Assessment of iodine nutritional status in school children concerning autoimmune thyroiditis in Tamil Nadu, India. Indian J Child Health [Internet]. 2021 Mar 17 [cited 2021 Mar 27];8(2):90–4. Available from: https://mansapublishers.com/IJCH/article/view/2765

10. Research VK-A in H, 2017 undefined. Effectiveness of Natrum muriaticum 1M on reduction of TSH Level in females between age group 35 to 55 years. researchgate.net [Internet]. [cited 2021 May 1]; Available from: https://www.researchgate.net/profile/Sathish_Kumar346/publication/323676527_EFFECTIVENESS_OF_NATRUM_MURIATICUM_1M_ON_REDUCTION_OF_TSH_LEVEL_IN_FEMALES_BETWEEN_AGE_GROUP_35_TO_55_YEARS/links/5aa376c5a6fdccd544b880ef/EFFECTIVENESS-OF-NATRUM-MURIATICUM-1M-ON-REDUCTION-OF-TSH-LEVEL-IN-FEMALES-BETWEEN-AGE-GROUP-35-TO-55-YEARS

11. Sathishkumar V, Priyanka PS, Chandrahasan CM, Reshmy KR, Deepa GS. Homoeopathy for Anti-Thyroid Peroxidase Antibody Titer in Hashimoto's Thyroiditis-a Clinical Study [Internet]. Vol. 25, Annals of the Romanian Society for Cell Biology. 2021 Apr [cited 2021 May 1]. Available from: http://annalsofrscb.ro

12. DeLuca HF. History of the discovery of vitamin D and its active metabolites. Bonekey Rep [Internet]. 2014 Jan 8 [cited 2021 Mar 29];3:479. Available from: /pmc/articles/PMC3899558/

13. Zhu GD, Okamura WH. Synthesis of Vitamin D (Calciferol). Chem Rev [Internet]. 1995 [cited 2021 Mar 25];95(6):1877–952. Available from: https://pubs.acs.org/doi/pdf/10.1021/cr00038a007

14. Webb AR. Who, what, where and when-influences on cutaneous vitamin D synthesis. Vol. 92, Progress in Biophysics and Molecular Biology. Pergamon; 2006. p. 17–25.

15. Lips P. Vitamin D physiology. Vol. 92, Progress in Biophysics and Molecular Biology. 2006. p. 4–8.

16. Functions of Vitamin D | Dairy Nutrition [Internet]. [cited 2021 Apr 3]. Available from: https://www.dairynutrition.ca/nutrients-in-milk-products/vitamin-d/functions-of-vitamin-d

17. Pfeifer M, Begerow B, Minne HW. Vitamin D and muscle function [Internet]. Vol. 13, Osteoporosis International. Springer; 2002 [cited 2021 Apr 2]. p. 187–94. Available from: https://link.springer.com/article/10.1007/s001980200012

18. Bikle DD. Vitamin D and bone. Curr Osteoporos Rep [Internet]. 2012 Jun 29 [cited 2021 Apr 2];10(2):151–9. Available from: https://link.springer.com/article/10.1007/s11914-012-0098-z

19. Merke J, Hofmann W, Goldschmidt D, Ritz E. Demonstration of 1,25(OH)2 vitamin D3 receptors and actions in vascular smooth muscle cells In vitro. Calcif Tissue Int [Internet]. 1987 Mar [cited 2021 Apr 3];41(2):112–4. Available from: https://pubmed.ncbi.nlm.nih.gov/2820558/

20. Santos PP dos, Rafacho BPM, Gonçalves A de F, Jaldin RG, Nascimento TB do, Silva MAB, et al. Vitamin D Induces Increased Systolic Arterial Pressure via Vascular Reactivity and Mechanical Properties. Seguro AC, editor. PLoS One [Internet]. 2014 Jun 12 [cited 2021 Apr 3];9(6):e98895. Available from: https://dx.plos.org/10.1371/journal.pone.0098895

21. Kristal-Boneh E, Froom P, Harari G, Ribak J. Association of calcitriol and blood pressure in normotensive men. Hypertension [Internet]. 1997 [cited 2021 Apr 3];30(5):1289–94. Available from: https://pubmed.ncbi.nlm.nih.gov/9369290/

22. McDonnell D, Pike J, biochemistry BO-J of steroid, 1988 undefined. The vitamin D receptor: a primitive steroid receptor related to thyroid hormone receptor. Elsevier [Internet]. [cited 2021 May 1]; Available from: https://www.sciencedirect.com/science/article/pii/002247318890074X

23. Høyer-Hansen M, Nordbrandt SPS, Jäättelä M. Autophagy as a basis for the health-promoting effects of vitamin D. Trends Mol Med. 2010 Jul;16(7):295–302.

24. Pfeffer PE, Hawrylowicz CM. Vitamin D and lung disease. Thorax [Internet]. 2012 Nov 1 [cited 2021 Apr 2];67(11):1018–20. Available from: http://thorax.bmj.com/

25. Prentice A. Vitamin D deficiency: a global perspective. Nutr Rev [Internet]. 2008 Sep 25 [cited 2021 Apr 5];66(SUPPL.2):S153–64. Available from: https://academic.oup.com/nutritionreviews/article-lookup/doi/10.1111/j.1753-4887.2008.00100.x

26. Saranac L, Zivanovic S, Bjelakovic B, Stamenkovic H, Novak M, Kamenov B. Why is the thyroid so prone to autoimmune disease? Horm Res Paediatr. 2011;75(3):157–65.

27. Dayan CM, Daniels GH. Chronic Autoimmune Thyroiditis. N Engl J Med [Internet]. 1996 Jul 11 [cited 2019 Apr 23];335(2):99–107. Available from: http://www.nejm.org/doi/abs/10.1056/NEJM199607113350206

28. Editor CLA. Handbook of Medical Neuropsychology [Internet]. Handbook of Medical Neuropsychology. 2019. Available from: http://link.springer.com/10.1007/978-3-030-14895-9

29. today RR-I, 1997 undefined. Th 1-type immunity is incompatible with successful pregnancy. Elsevier [Internet]. [cited 2021 May 1]; Available from: https://www.sciencedirect.com/science/article/pii/S0167569997011274

30. [Laboratory diagnosis of autoimmune thyroid disease] - PubMed [Internet]. [cited 2021 May 1]. Available from: https://pubmed.ncbi.nlm.nih.gov/11695307/

31. Sinclair D. Clinical and laboratory aspects of thyroid autoantibodies. Vol. 43, Annals of Clinical Biochemistry. 2006. p. 173–83.

32. Kapali A, Beerappa J, Raghuram P, Bangar R. Diagnostic accuracy of ultrasound imaging in Hashimoto's thyroiditis. Thyroid Res Pract [Internet]. 2017 [cited 2021 May 1];14(1):28. Available from: http://www.thetrp.net/text.asp?2017/14/1/28/200567

33. Wu G, Zou D, Cai H, Liu Y. Ultrasonography in the diagnosis of Hashimoto's thyroiditis. Front Biosci - Landmark. 2016 Jun 1;21(5):1006–12.

34. Gayathri BN, Kalyani R, Harendra Kumar ML, Krishna Prasad K. Fine needle

aspiration cytology of Hashimoto's thyroiditis - A diagnostic pitfall with review of literature. J Cytol [Internet]. 2011 Oct [cited 2021 Apr 9];28(4):210–3. Available from: /pmc/articles/PMC3214470/

35. Dr.Fiona Aronovitz M.B.B.Ch (rand). MH. Treating thyroid disorders. Homoeopath Herit. 40.

36. Samuel H. Organon of Medicine. 5th and 6t. new delhi: B.JAIN PUBLISHERS (P) LTD; 2002. 292 p.

37. A New Look at Hypothyroidism - Google Books [Internet]. [cited 2021 Apr 10]. Available from: https://books.google.co.in/books?hl=en&lr=&id=_pefDwAAQBAJ&oi=fnd&pg=PA47&dq=complication+of+hashimoto%27s+thyroiditis&ots=6YADyMrTpM&sig=0RLkMJuEfkiXYIGcv8vMa9gzB_Q&redir_esc=y#v=onepage&q=complication of hashimoto's thyroiditis&f=false

38. Hashimoto's Thyroiditis Complications - Disorders Associated with this Common Thyroid Disease [Internet]. [cited 2021 May 1]. Available from: https://www.endocrineweb.com/conditions/hashimotos-thyroiditis/hashimotos-thyroiditis-complications

39. Hashimoto's Disease: Signs, Symptoms, and Complications [Internet]. [cited 2021 May 1]. Available from: https://www.verywellhealth.com/hashimotos-disease-symptoms-3976273

40. Evliyaoğlu O, Acar M, Özcabı B, Erginöz E, Bucak F, Ercan O, et al. Vitamin D Deficiency and Hashimoto's Thyroiditis in Children and Adolescents: a Critical Vitamin D Level for This Association? J Clin Res Pediatr Endocrinol [Internet]. 2015 Jun 5 [cited 2019 Apr 30];7(2):128–33. Available from: http://cms.galenos.com.tr/Uploads/Article_1346/JCRPE-2-128.pdf

41. Unnikrishnan A, Kalra S, … RS-I journal of, 2013 undefined. Prevalence of hypothyroidism in adults: An epidemiological study in eight cities of India. ncbi.nlm.nih.gov [Internet]. [cited 2021 May 1]; Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/pmc3743364/

42. Shinee G. A Clinical study on the Antimiasmatic Treatment of patients with

Hypothyroidism. 2018 [cited 2021 May 1]; Available from: http://repository-tnmgrmu.ac.in/id/eprint/10583

43. Chiovato L, Magri F, Carlé A. Hypothyroidism in Context: Where We've Been and Where We're Going. Vol. 36, Advances in Therapy. Springer Healthcare; 2019. p. 47–58.

44. Chauhan V, Manchanda R, Narang A, Homeopathy RM-, 2014 undefined. Efficacy of homeopathic intervention in subclinical hypothyroidism with or without autoimmune thyroiditis in children: an exploratory randomized control study. Elsevier [Internet]. [cited 2021 May 1]; Available from: https://www.sciencedirect.com/science/article/pii/S1475491614000812

45. Amritha Mohan B. "A CLINICAL STUDY ON THE MANAGEMENT OF HYPOTHYROIDISM IN FEMALES USING LM POTENCY" A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF DOCTOR OF MEDICINE IN HOMOEOPATHY: M.D. (HOM.) IN ORGANON OF MEDICINE AND HOMOEOPATHIC PHILOSOPHY [Internet]. 2019 [cited 2021 May 1]. Available from: http://repository-tnmgrmu.ac.in/10748/

46. Adam S, Seron X, Seghers A, Daumerie C. Anxiety and depression, attention, and executive functions in hypothyroidism Relationships between memory, emotion and self; psychopathological implications View project Socio-emotional changes in brain-damaged patients View project. Artic J Int Neuropsychol Soc [Internet]. 2005 [cited 2021 May 1]; Available from: https://www.researchgate.net/publication/7552519

47. clinica VJ-P, 1972 undefined. A psychiatric study of hypothyroidism. psycnet.apa.org [Internet]. [cited 2021 May 1]; Available from: https://psycnet.apa.org/record/1974-23657-001

48. Stress and Your Thyroid: What's the Connection? [Internet]. [cited 2021 May 1]. Available from: https://www.healthline.com/health/hypothyroidism/stress-and-your-thyroid#

49. Kumar H, Singh V, Meena B, … SG-TR and, 2016 undefined. Clinical profile of

thyroid dysfunction in elderly: An overview. thetrp.net [Internet]. [cited 2021 May 1]; Available from: https://www.thetrp.net/article.asp?issn=0973-0354;year=2016;volume=13;issue=3;spage=101;epage=105;aulast=Kumar

50. Samuel H. organon of Medicine. 5th and 6t. new delhi: B.JAIN PUBLISHERS (P) LTD; 2002.

51. Kresser chris; eBook; Thyroid Disorders; booklet; www.chriskresser.com; 14.01.2015 ; 12.30 pm; page: 23-25. - Google Search [Internet]. [cited 2021 May 1]. Available from: https://www.google.com/search?q=Kresser+chris%3B+eBook%3B+Thyroid+Disorders%3B+booklet%3B+www.chriskresser.com%3B+14.01.2015+%3B+12.30+pm%3B+page%3A+23-25.&oq=Kresser+chris%3B+eBook%3B+Thyroid+Disorders%3B+booklet%3B+www.chriskresser.com%3B+14.01.2015+%3B+12.30+pm%3B+page%3A+23-25.&aqs=chrome..69i57.11190j0j4&sourceid=chrome&ie=UTF-8

52. Zulewski H, Müller B, Exer P, Miserez AR, Staub J-J. Estimation of Tissue Hypothyroidism by a New Clinical Score: Evaluation of Patients with Various Grades of Hypothyroidism and Controls1. J Clin Endocrinol Metab [Internet]. 1997 Mar 1 [cited 2021 May 1];82(3):771–6. Available from: https://academic.oup.com/jcem/article/82/3/771/2656260

53. Professor A, Mundanattu N, Pg ; Case report on hashimoto's thyroiditis and homoeopathy. ~ 235 ~ Int J Homoeopath Sci [Internet]. 2020 [cited 2021 May 1];4(2). Available from: www.homoeopathicjournal.com

54. Tamer G, Arik S, Tamer I, Coksert D. Relative vitamin D insufficiency in Hashimoto's thyroiditis. Thyroid. 2011 Aug 1;21(8):891–6.

## APPENDIX- II

## GLOSSARY

**REPERTORY**: Repertory is a systematically and logically arranged index to the homoeopathic Materia medica, which is full of information collected from toxicology, drug proving and clinical experience.

**ANTIBODIES**: Proteins produced by your body's immune system that attack invaders, such as viruses. However, antibodies may also mistakenly attack healthy tissue. When antibodies attack the thyroid, it can stunt thyroid hormone production. This may result in hypothyroidism.

**AUTOIMMUNE DISEASE**: A disease caused by a defect in the body's immune system. Instead of protecting the body, it attacks and destroys a healthy part of the body. Having an autoimmune disease is considered a risk factor for hypothyroidism..

**GOITER**: Enlargement of the thyroid gland. When your thyroid is bombarded by signals from the pituitary in an effort to trigger the thyroid into making more hormones, the excessive stimulation may cause the thyroid gland to enlarge to the point where you have a bulge in your neck.

**HASHIMOTO'S THYROIDITIS**: Inflammation of the thyroid gland described by Dr. Hakaru Hashimoto. It is the most common cause of hypothyroidism.

**HYPOTHYROIDISM**: An underactive thyroid gland—when the thyroid does not produce sufficient amounts of hormones. Symptoms are associated with decreased metabolism due to too little thyroid hormone in the blood.

**IODINE**: A non-metallic element found in food that is essential for normal thyroid function. The thyroid extracts iodine from the blood and incorporates it into thyroid hormone, which in turn, controls metabolism.

**LEVOTHYROXINE SODIUM**: The generic name for synthetic T4 hormone used to treat hypothyroidism.

**SYNTHETIC THYROID SUPPLEMENT**: Generally called levothyroxine, synthetic thyroid supplements are the standard treatment for hypothyroidism. They are man-made but are exactly the same as the T4 that is produced and released by the thyroid.

**THYROID STIMULATING HORMONE (TSH**): A hormone produced by the pituitary gland that stimulates the thyroid gland to inhibit or release hormones.

**ANTI-THYROID PEROXIDASE ANTIBODY (TPOAb**): Anti-thyroid peroxidase antibody are specific for autoantigen TPO. It catalyses iodine oxidation and thyroglobulin tyrosyl iodination reaction in the thyroid gland.

**THYROGLOBULIN ANTIBODIES (TgAb):** Thyroglobulin antibodies are specific for thyroglobulin. It is a matrix protein involved in thyroid hormone production.

**25-HYDROXYVITAMIN$_3$ [25(OH)D$_3$]:** It is also called as calcifediol which is a form of vitamin D produced in the liver by hydroxylation of Vitamin $D_3$, by the enzyme vitamin D 25-hydroxulase.

**THYROIDITIS**: Inflammation of the thyroid gland. This can affect the thyroid's ability to produce and secrete hormones and can lead to permanent destruction of the thyroid gland.

**RUBRICS**: Rubrics are the converted forms of symptoms of a person or drug, thus a rubric is the reportorial language of representing a symptom.

**MIASM**: A toxic agent or a pollutant, which can cause disease.

# Appendix - III

*"Case records are our valuable asset"*

**SARADA KRISHNA**

**HOMOEOPATHIC MEDICAL COLLEGE & HOSPITAL**

*KULASEKHARAM, KANYAKUMARI DIST, TAMIL NADU- 629161*

---

**CHRONIC CASE RECORD**

O.P No: UNIT: Date:

---

Name:

Age: Sex: Religion: Nationality:

Name of father/Spouse/Guardian/Son/Daughter:

Marital status:

Occupation:

Family size:

Diet:

Address:

Phone No (Mobile):

**FINAL DIAGNOSIS:**

| | |
|---|---|
| Homoeopathic | |
| Disease | |

| **RESULT:** | Cured | Relieved | Referred | Otherwise | Expired |
|---|---|---|---|---|---|
| | | | | | |

| 2. INITIAL PRESENTATION OF ILLNESS | | |
|---|---|---|
| PATIENT'S NARRATION (in the very expressions used by him/her) | PHYSICIAN,S INTEROGATION (details regarding symptoms narrated) | PHYSICIAN'S OBSERVATION |
| | | |

**3. PRESENTING COMPLAINTS**

| LOCATION (tissues, organs, systems extensions & duration direction & frequency) | SENSATION & PATHOLOGY | MODALITY (>,<) & A/F (=) | CONCOMITANTS IF ANY |
|---|---|---|---|
| | | | |

**4. HISTORY OF PRESENTING ILLNESS:**

## 5. HISTORY OF PREVIOUS ILLNESS

| NO | Age/Year | Ilness, trauma, fright, burns, drug allergy(ies), operation(s), exposure(s), innnoculation, vaccination(s), serum, steroids, hormone therapy, antibiotics, analgesics, etc. | Treatment Adopted | Outcome |
|---|---|---|---|---|
| | | | | |

## 6. HISTORY OF FAMILY ILLNESS

## 7. PERSONAL HISTORY

A. LIFE SITUATION

Place of birth: Caste:

Socio- economic status:

Nutritional status:

Dwelling: Customs: Nature of Work:

Political Status:

Religion:

Educational status :

Marital status: Year of Marriage:

Family status:

Father: Mother: Siblings: Male: Children:

B. HABITS & HOBBIES

Food:

Addictions:

Sleep:

Artistic:

Games/Sports:

C. DOMESTIC RELATIONS

With family members:

With other relatives:

With neighbours/friends/colleagues:

D. SEXUAL RELATIONS:

Pre-Marital: Marital: Extra Marital:

Others:

**8. LIFE SPACE INVESTIGATION**

**9. MENSTRUAL HISTORY**:

A.Menses L.M.P: Amenorrhoea-

Primary/Secondary

| Cycle/Regularity &its Duration | Duration Of Menses | **FLOW** | | | |
|---|---|---|---|---|---|
| | | Qty | Consistency &clots | Color & ododr | Stains &Acidity |
| | | | | | |

**CONCOMITANTS**

| BEFORE | AT START OF | DURING | AFTER |
|---|---|---|---|
| | | | |

B.Previous History: Changes in Menstrual Cylce Menarche:

Early/Late

Early Years (first 3-4 Yrs) Before Marriage: FMP:

After Pregnancy(ies) Recent Complaints related to Meanrche

After Marriage

C. Climacteric:

Symptoms associated

| Pre-Menopause | With Menopause | Post Menopause |
|---|---|---|
| | | |

D. Abnormal Vaginal Discharges (Leucorrhoea/Lochia)

| Type | Quantity | Onset Duration | Color Odour | Stains Acridity | Relation with menses | Modalities | Accompaniments | Obvious reason if any |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**10. OBSTETICAL HISTORY**:

| Gravida | Para | Abortion | Death | Live |
|---|---|---|---|---|
| | | | | |

**A. Previous Pregnancies Including Abortion:**

| No | Age of Conception | Yr. Date and Period Of Pregnancy | Abnormalities in Pregnancy & Treatment Adopted | Labour Events | Mode Of Delivery | Nature Of Purperium |
|---|---|---|---|---|---|---|
| | | | | | | |

**Child**

| Gender | Birth Weight | Condition of Birth | Congenital Abnormality | Viability | Cause of Death | Lactation History |
|---|---|---|---|---|---|---|
| | | | | | | |

**B.Contraceptive method(s) adopted** 1.Temproary (used/inuse/duration)

2.Permanent ( changes of contraceptive method(s) and if so reason, any complaints from use)

**C. Present Pregnancy:** L.M.P Date of Quickening E.D.C

H/O Morning sickness

Other Complaints

**11. GENERAL SYMPTOMS:**

**A. PHYSICALS**

I. FUNCTIONAL

i. Appetite :
ii. Thirst :
iii. Sleep :
iv. Dreams

II. ELIMINATIONS

i. Stool :
ii. Urine :
iii. Sweat :
iv. Breath
v. Discharges
vi. Abnoraml Secretions & Excrertions

III. REACTIONS TO

| **REACTIONS TO** | **Aversions** | **Desire** | **Intolerance/ Sensitive to** | **Aggravation** | **Amelioration** |
|---|---|---|---|---|---|
| Time | | | | | |
| Thermal | | | | | |
| Season | | | | | |
| Meterological | | | | | |
| Moon Phase | | | | | |
| Places | | | | | |
| Air/Fanning | | | | | |
| Clothing/Covering | | | | | |
| Bathing/Washing | | | | | |
| Food/Drinks | | | | | |
| Undigested Food | | | | | |
| Touch/Pressure | | | | | |
| Posture | | | | | |
| Motion | | | | | |
| Sleep | | | | | |
| Sex | | | | | |
| Spl.Senses | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Eliminations | | | | | |
| Menses | | | | | |

IV . CONSTITUTIONAL

| **Physical Makeup** | **Temperament** | **Thermal** | **Side Affinity** | **Sensation/Tendencies** |
|---|---|---|---|---|
| | | | | |

**B. MENTAL GENERAL**

**1. Will & Emotions including motivations** ( Love, hat, anger, sadness, fear.fright, anxiety, suspicious, cause, modalities, state, aversion and cravings ( excluding food & drinks,) etc.

**2. Understanding and Intellect** (perception, thinking, consciousness, decision, confidence, speech, motivation, cause, mental state)

**3. Memory** (Effect on Behaviour & functions)

**12. PHYSICAL EXAMINATION**

A) GENERAL

- Conscious :
- General appearance:
- General built and nutrition:
- Height
- Weight
- BMI
- Anaemia:
- Jaundice:
- Clubbing:
- Cyanosis:
- Oedema :
- Nails
- Gait
- Lymphadenopathy:
- Pulse rate: Resp rate: B.P:

- Temp
- Others

**B.SYSTEMIC EXAMINATION**

1. Respiratory system:
2. Cardiovascular system:
3. Gastro Intestinal system:
4. Urogenital system:
5. Skin and glands :
6. Musculoskeletal system
7. Central Nervous system:
8. Endocrine:
9. Eye and ENT:
10. Others:

**C.REGIONALS**

**13. LABORATORY FINDINGS**

**14. DIAGNOSIS**

- ❖ Provisional Diagnosis :
- ❖ Differential Diagnosis:
- ❖ Final Diagnosis (Disease):

**15 .DATA PROCESSING**

A. ANALYSIS OF CASE

| COMMON | UNCOMMON |
|---|---|
| | |

B. EVALUATION OF SYMPTOMS/TOTALITY OF SYMPTOMS

C. MIASMATIC ANALYSIS:

| | PSORA | SYCOSIS | SYPHILIS |
|---|---|---|---|
| Family History | | | |
| Past History | | | |
| Mind | | | |
| Body | | | |

MIASMATIC DIAGNOSIS:

D. TOTALITY OF SYMPTOMS

E. HOMOEOPATHIC DIAGNOSIS

**16 . SELECTION OF MEDICINE**

**A. Non Repertorial Approach**

**B. Repertorial Approach**

**a)Repertorial Totality:** ( Selection of appropriate Repertory, Selection of symptoms for repertorisation, conversion of symptoms into corresponding rubrics for repertorisation)

| No | Symptoms | Rubrics | Explanation | Page No |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

b) **Repertorial result:**

| Medicine | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |

c) **PDF if any**

d)**Analysis of Repertorial Result**

**17. SELECTION OF POTENCY AND DOSE**

**A. Potency**

**B. Dose**

**18. PRESCRIPTION**

## 19.GENERAL MANAGEMENT INCLUDING AUXILLARY MEASURES

**A. General/Surgical/Accessory:**

**B. Restrictions (Diet, Regimen etc.):**

| Disease | Medicinal |
|---|---|
| | |

| **20. PROGRESS & FOLLOW UP** | | | |
|---|---|---|---|
| **DATE** | **SYMPTOM(S) CHANGES** | **INFERENCE** | **PRESCRIPTION** |
| | | | |

# APPENDIX IV

## ZULEWSKI'S CLINICAL SCORE

## IMPROVEMENT CRITERIA

Hashimoto's thyroiditis does not have a specific score of its own. The symptoms present like that of hypothyroidism only.

### Zulewski's Clinical Score For Hypothyroidism:

| NO. | SYMPTOMATOLOGY | ABSENT(0) | PRESENT(1) |
|---|---|---|---|
| | **SYMPTOMS** | | |
| 1 | DIMINISHED SWEATING | | |
| 2 | HOARSENESS | | |
| 3 | PARAESTHESIA | | |
| 4 | DRY SKIN | | |
| 5 | CONSTIPATION | | |
| 6 | WEIGHT GAIN | | |
| 7 | WEAKNESS | | |
| | **PHYSICAL SIGNS** | | |
| 1 | COARSE SKIN | | |
| 2 | COLD SKIN | | |
| 3 | SLOW MOVEMENTS | | |
| 4 | PERIORBITAL PUFFINESS | | |

**Sum of all symptoms and signs:**

**0-3: Marked; 4-6: Moderate; 7-9: Mild; 10-11: No improvement**.

The patient was clinically considered hypothyroid if score was >5, euthyroid if score was <3, and intermediate if score was between 3 and 5. This score will be correlated with biochemical thyroid profile.

# APPENDIX – V

## FORM - 4 : CONSENT FORM (A)

## INFORMATION FOR PARTICIPANTS OF THE STUDY

The title of my study is "A CLINICAL STUDY TO ASSESS THE ROLE OF VITAMIN D DEFICIENCY IN HASHIMOTOS THYROIDITIS AND EFFICACY OF SYNTHESIS REPERTORY". The purpose of my study is (1.) To study the role of vitamin D in Hashimoto's thyroiditis and also to assess variation in the levels of vitamin D before and after treatment. (2.) To study frequently used rubric in synthesis repertory on Hashimoto's thyroiditis and its complications. (3.) To find the remedies in the treatment of Hashimoto's thyroiditis in synthesis repertory. The expected duration of subject's participation is from July 2019 to January 2021.

The procedure includes minimum of 30 cases which will be randomly considered for the study. Cases will be recorded in the pre- structured SKHMC chronic case format. Reportorial approach according to Synthesis repertory by Dr.Frederick Schroyens is taken. Prescription is done with reference to standard text books of Materia Medica. Potency selection and repetition will be done according to the principles laid down in the Organon of Medicine. All minute changes in the symptoms will be observed and recorded. Standard treatment guidelines by CCRH will be followed. Any serious adverse effect or irreversible pathology during the study will be predicted earlier and referred to higher treatment centers. This will be notified immediately to the ethical committee. Proper statistical analysis will be done with the improvement assessed in each case.

The benefit to the subject or others, reasonably expected from research is (1) The participant is examined to find out whether he/she is having Hashimoto's thyroiditis. (2) his/ her vitamin D levels will also be checked and the co-relation will be assessed. (3) If the participant is identified to suffer from Hashimoto's thyroiditis he/she will be given awareness about the risk of Hashimoto's thyroiditis and its co-relation with level of Vitamin D. (4) This study is a benefit not only to the participant but also to the society as a whole. The records are maintained highly confidential. Only the investigator has the access to the subject's medical records. Participants' identity will never be disclosed at anytime, during or after the study period or during publication of the research. Securely store data documents in locked locations and encrypted identifiable computerized data. All

information revealed by the patient will be kept as strictly confidential. Free treatment for research related injury is guaranteed. Compensation of the participants not only for disability or death resulting from such injury but also for unforeseeable risk is provided, in case situation arises

Contact for trial related queries, rights of the subject and in the event of any injury:

**INVESTIGATOR**

Dr. Sanofer Nazeema S

Department of Case Taking & Repertory,

Sarada Krishna Homoeopathic Medical College & Hospital,

Kulasekharam, Kanyakumari District, Tamil Nadu- 629161

Phone no: 9500181831.

**GUIDE**

Dr. V.SATHISH KUMAR. M.D.(Hom)

Professor and HOD

Department of Case Taking & Repertory,

Sarada Krishna Homoeopathic Medical College,

Kulasekharam. Kanyakumari District, Tamil Nadu- 629161

Phone – 9443500675

There will not be any anticipated prorated payment to the subject for participating in the trial. The responsibilities to the participant in the trial are; they must disclose all about their complaints, participants must strictly stick on to the scheduled diet and regimen.

The participation is voluntary, that the subject can withdraw from the study at any time and that refusal to participate will not involve any penalty or loss of benefits to which the subject is otherwise entitled.

SIGNATURE OF THE INVESTIGATOR:

**CONSENT FORM**

PART 2 of 2- Participant consent form

**Informed Consent form to participate in a clinical trial**

Participant's name:

Address:

**Title of the project**: **"A CLINICAL STUDY TO ASSESS THE ROLE OF VITAMIN D DEFICIENCY IN HASHIMOTO'S THYROIDITIS AND EFFICACY OF SYNTHESIS REPERTORY"**

The details of the study have been provided to me in writing and explained to me in my own language. I confirm that I have understood the above study and had the opportunity to ask questions. I understand that my participation in the study is voluntary and that I am free to withdraw at any time, without giving any reason, without the medical care that will normally be provided by the hospital being affected. I agree not to restrict the use of any data or results that arise from this study provided such a use is only for scientific purpose(s). I have been given an information sheet giving details of the study. I fully consent to participate in the above study.

Signature of the participant: _____ Date: _____

Signature of the witness: _____ Date: _____

Signature of the investigator: _____Date: _____

**CONSENT FORM (for participants less than18 years of age)**

PART 2 of 2- Parent/Legally accepted representative (LAR)

Participant's name:

Address:

Parent/LAR' s name:

**Title of the project**: **"A CLINICAL STUDY TO ASSESS THE ROLE OF VITAMIN D DEFICIENCY IN HASHIMOTO'S THYROIDITIS AND EFFICACY OF SYNTHESIS REPERTORY"**

The details of the study have been provided to me in writing and explained to me in my own language. I confirm that I have understood the above study and had the opportunity to ask questions. I understand that my child/ward's participation in the study is voluntary and that I am free to withdraw my child/ward at any time, without giving any reason, without the medical care that will normally be provided by the hospital being affected. I agree not to restrict the use of any data or results that arise from this study provided such a use is only for scientific purpose(s). I have been given an information sheet giving details of the study. I fully consent for the participation of my child/ward in the above study.

Assent of child/ward obtained (for participants 7 to 18 years of age)

Signature of the parent/ LAR: _____ Date: _____

Signature of the witness : _____Date: _____

Signature of the investigator: _____ Date: _____

# APPENDIX VI

## SAMPLE CASE 1

***"Case records are our valuable asset"***

**SARADA KRISHNA**

**HOMOEOPATHIC MEDICAL COLLEGE & HOSPITAL**

KULASEKHARAM, KANYAKUMARI DIST, TAMIL NADU- 629161

---

**CHRONIC CASE RECORD**

O.P No: 7490/19 UNIT: II A Date: 16/11/19

---

Name: Miss. SD

Age: 35yrs Sex: Female Religion: Hindu Nationality: Indian

Name of Father/Spouse/Guardian/Son/Daughter: Mr. Mahesh Kumar

Marital status: Married

Occupation: Coolie

Family size: 5 members

Diet: Mixed diet

Address: Sree Kumari Bhavan, Ramaparambu, Thukaley

Phone No (Mobile): 9488408650

**FINAL DIAGNOSIS:**

| | |
|---|---|
| Homoeopathic | **CHRONIC MIASMATIC DISEASE – PSORA** |
| Disease | **HASHIMOTOS THYROIDITIS** |

| | | | | | |
|---|---|---|---|---|---|
| **RESULT:** | Cured | **Relieved** | Referred | Otherwise | Expired |

| 2. **INITIAL PRESENTATION OF ILLNESS** | | |
|---|---|---|
| PATIENT'S NARRATION (in the very expressions used by him/her) | PHYSICIAN,S INTEROGATION (details regarding symptoms narrated) | PHYSICIAN'S OBSERVATION |
| I am having palpitation and vertigo since 5 months and swelling in throat. | How long do you have this complaint?<br>I am having this swelling since 3years.<br>Do you have any other disturbances along with this?<br>I have a sensation of lump in the throat always<br>When does the vertigo occur?<br>Vertigo occurs especially at night.<br>When do you have palpitation?<br>I have palpitation on and off even during slightest anxiety.<br>Do you have any other associated complaint?<br>I feel tiredness and weakness especially of my legs.<br>Is there any else disturbing you?<br>My sleep is disturbed and I am not able to eat properly. | Introvert<br>Co-operative<br>Earthly complexion<br>Steady gait |

## 3. PRESENTING COMPLAINTS

| Location | Sensation | Modalities | Concomitants |
|---|---|---|---|
| Chest<br>(Since 5 months) | Palpitation | < night++<br>< slight anxiety +++<br>>lying+ | |
| General<br>(since 5 months) | Vertigo, occasionally | <night++<br><during palpitations | |
| Swelling in the neck | Painless | | Tiredness and weakness especially |

| | | | |
|---|---|---|---|
| (since 3 years) | Sensation of lump in the throat | | the legs |

**4. HISTORY OF PRESENTING ILLNESS:**

The patient complaint started gradually before 3 years as swelling in the throat. She didn't get any signs or symptoms. She had swelling and sensation of lump in the throat. She took allopathic medications for the complaint and got temporary relief. Then she stopped the medication without doctor's advice. For the past 5 months she is having complaints of vertigo and palpitations that occur on and off. She has not taken any specific medication for this complaint.

**5. HISTORY OF PREVIOUS ILLNESS**

| S l No | Age/Year | Illness, trauma, fright, burns, drug allergy(ies), operation(s), exposure(s), inoculation, vaccination(s), serum, steroids, hormone therapy, antibiotics, analgesics, etc. | Treatment Adopted | Outcome |
|---|---|---|---|---|
| 1. | Childhood | Chicken pox | Traditional treatment | Relieved |
| 2. | 7 years | Typhoid fever | Allopathy | Relieved |
| 3. | 8 years | Jaundice | Allopathy | Relieved |

**6. HISTORY OF FAMILY ILLNESS**

Father – Diabetes Mellitus and hypertension; Mother - hypertension

**7. PERSONAL HISTORY**

E. LIFE SITUATION

Place of birth: Thiruvattar Caste:

Socio- economic status: low

Nutritional status: moderate

Dwelling: Thakaley Customs: Nature of Work: manual

Political Status:

Religion: Hindu

Educational status: 5th

Marital status: Married Year of Marriage: at 27 yrs of age

Family status: nulcear

Father: Alive Mother: Alive Siblings: 2 M: 1 F: 1 Children:2 (F)

F. HABITS & HOBBIES

Food: Non Vegetarian

Addictions: NP

Artistic: NP

Games/Sports: NP

G. DOMESTIC RELATIONS

With family members: Good

With other relatives: Good

With neighbours/friends/colleagues: Good

H. SEXUAL RELATIONS:

Pre-Marital: Marital: Extra Marital:
Others:

**8. LIFE SPACE INVESTIGATION**

The patient was born in a low socio economic status family. She studied up to 5th standard. She has one brother and one sister. Due to the financial status of the family she had to go to work for daily wages. She was not able to continue her studies. She joined in a hospital foe housekeeping job, but she felt very uncomfortable being there. When she see others crying she would also weep some times.

She was married at the age of 27 years. She always had problems with her in laws because they were not satisfied with the dowry and always used to mock her. She used to adjust a lot and try to be one with the family. But after a certain period of time they had to move as a nuclear family. He husband used to get angry in his work place and show it on her after coming home. She starts crying every time he scolds her and becomes happy once he says sorry and comforts her.

She always wanted to travel to long distant place where she feels relaxed and free out of the family dramas and works. Recently they had started to build a small house for themselves and it has led to financial crisis.

**9. MENSTRUAL HISTORY**:

A. Menses

L.M.P: 23/10/2019 Amenorrhoea-Primary/Secondary

| Cycle/Regularity &its Duration | Duration Of Menses | Flow | | | |
|---|---|---|---|---|---|
| | | Qty | Consistency &clots | Colour & odour | Stains &Acidity |
| 28-30 days | 4-5 days | Profuse during first 2 days | Not Clotted | Bright red | Nil |

**CONCOMITANTS**

| BEFORE | AT START OF | DURING | AFTER |
|---|---|---|---|
| | | | |

B. Previous History: Changes in Menstrual Cycle Menarche: Early/Late

Early Years (first 3-4 Yrs) Before Marriage: FMP: 15years

After Pregnancy(ies) Recent Complaints related to Menarche

After Marriage

C. Climacteric:

Symptoms associated

| Pre-Menopause | With Menopause | Post Menopause |
|---|---|---|
| | | |

E. Abnormal Vaginal Discharges (Leucorrhoea/Lochia)

| Type | Quantity | Onset Duration | Color Odour | Stains Acridity | Relation with menses | Modalities | Accompaniments | Obvious reason if any |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**10. OBSTETICAL HISTORY**:

| Gravida | Para | Abortion | Death | Live |
|---|---|---|---|---|
| 2 | 2 | 0 | 0 | 2 |

**A. Previous Pregnancies Including Abortion:**

| No | Age of Conception | Yr. Date and Period Of Pregnancy | Abnormalities in Pregnancy & Treatment Adopted | Labour Events | Mode Of Delivery | Nature Of Perpeurium |
|---|---|---|---|---|---|---|
| 1 | 28 | 2012 | Nil | Normal | LSCS | Normal |
| 2 | 30 | 2014 | Nil | Normal | LSCS | Normal |

**Child**

| Gender | Birth Weight | Condition of Birth | Congenital Abnormality | Viability | Cause of Death | Lactation History |
|---|---|---|---|---|---|---|
| Female | 2.5kg | Stable | Nil | Viable | | |
| Female | 3 kg | Stable | Nil | viable | | |

**B. Contraceptive method(s) adopted**

1. Temporary (used/in use/duration)

2. Permanent (changes of contraceptive method(s) and if so reason, any complaints from use)

**C. Present Pregnancy:** L.M.P Date of Quickening E.D.C

H/O Morning sickness

Other Complaints

**11. GENERAL SYMPTOMS:**

**A. PHYSICALS**

J. FUNCTIONAL

v. Appetite : Diminished, 3meals/day

vi. Thirst : 5 glasses/day

vii. Sleep :5-6 hrs/ day, disturbed sleep

viii. Dreams: NP

II. ELIMINATIONS

vii. Stool : regular, not constipated

viii. Urine : NP

ix. Sweat : generalised

x. Breath: NP

xi. Discharges: NP

xii. Abnormal Secretions & Excretions : NP

III. REACTIONS TO

| **REACTIONS TO** | **Aversions** | **Desire** | **Intolerance / Sensitive to** | **Aggravation** | **Amelioration** |
|---|---|---|---|---|---|
| Time | | | | | |
| Thermal | | | | | |
| Season | | Cold | | | |
| Meterological | | | | | |
| Moon Phase | | | | | |
| Places | | | | | |
| Air/Fanning | | Open air | | | |
| Clothing/ Covering | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Bathing/ Washing | | Cold | | | |
| Food/Drinks | | cold drinks, spicy food | | | |
| Undigested Food | | | | | |
| Touch/Pressure | | | | | |
| Posture | | Lying on back | | | |
| Motion | | | | | |
| Sleep | | | | | |
| Sex | | | | | |
| Spl.Senses | | | | | |
| Eliminations | | | | | |
| Menses | | | | | |

IV . CONSTITUTIONAL

| **Physical Makeup** | **Temperament** | **Thermal** | **Side Affinity** | **Sensation/Tendencies** |
|---|---|---|---|---|
| Hydrogenoid | Sanguine | Hot | NP | NP |

**B. MENTAL GENERAL**

**1. Will & Emotions including motivations** ( Love, hate, anger, sadness, fear, fright, anxiety, suspicious, cause, modalities, state, aversion and cravings ( excluding food & drinks,) etc.

Desire company

Desire to travel

Want of consolation

Weeps easily

Adjustable

**2. Understanding and Intellect** (perception, thinking, consciousness, decision, confidence, speech, motivation, cause, mental state)

Good thought processes, conscious, indecisive

**3. Memory** (Effect on Behaviour & functions): good

## 12. PHYSICAL EXAMINATION

A) GENERAL

- Conscious : conscious
- General appearance: good, Earthly complexion
- General built and nutrition: moderately built
- Height: 154cm
- Weight:75kg
- BMI:31.8 $kg/m^2$
- Anaemia: absent
- Jaundice: non-icteric
- Clubbing: Absent
- Cyanosis: Absent
- Oedema : Absent
- Nails: healthy
- Gait: steady
- Lymphadenopathy Nil:
- Pulse rate: 73 beats/min Resp Rate18/min: B.P: 114/80mm Hg
- Temp: 98.6 $^0$ F
- Others

## B.SYSTEMIC EXAMINATION

11. Respiratory system: NAD
12. Cardiovascular system: NAD
13. Gastro Intestinal system: NAD
14. Urogenital system: NAD
15. Skin and glands :NAD

16. Musculoskeletal system: NAD
17. Central Nervous system: NAD
18. Endocrine: 1. NECK: (O/E)

**Inspection:**

Pizzillo's method: uniform bilateral swelling present.

Swelling moves upwards on deglutition.

No pressure on great veins.

While protruding tongue, movement is normal

**Palpation:**

Lahey's method: solitary soft bilateral swelling.

No palpable nodes felt.

No pressure effects.

Kocher's test: negative.

No any engorgement of neck veins.

Cervical lymph nodes are normal.

**Auscultation:**

No systolic bruit heard on examination of thyroid Gland

Neck circumference : 38 cm

19. Eye and ENT: NAD
20. Others: NAD

**C.REGIONALS**

Tongue: Clean

Nail : healthy

Skin: dry

**13. LABORATORY FINDINGS**

**On 12/12/2018-**

T3 – 86.91 mg/dl;

T4 – 7.970 mg/dl

TSH - >100MIU/Ml;

TgAb –510.7IU/ml;

TPO – 190.3IU/ml ;

25(OH)D – 12.75ng/ml

**14. DIAGNOSIS**

- Provisional Diagnosis :
  HASHIMOTOS THYROIDITIS?
- Differential Diagnosis:
  HYPOTHYROIDISM
  HYPERTHYROIDISM
- Final Diagnosis (Disease):
  HASHIMOTOS THYROIDITIS

**15 .DATA PROCESSING**

A. ANALYSIS OF CASE

| COMMON | UNCOMMON |
|---|---|
| • Swelling in the anterior part of neck<br>• Palpitation < anxiety++<br>• Palpitation > lying<br>• Vertigo < tension<br>• Tiredness<br>• Appetite : reduced++<br>• Disturbed sleep++<br>• Dryness of skin | • Vertigo <night<br>• Sensation of lump in throat<br>• Weakness of lower limbs<br>• Desire for travelling<br>• Adjustable<br>• Weeps easily<br>• Thermal : hot<br>• Thirst: reduced |

B. EVALUATION OF SYMPTOMS/TOTALITY OF SYMPTOMS

- Adjustable
- Desire for traveling
- Weeps easily
- Diminished appetite
- Reduced thirst
- Disturbed sleep

- Sensation of lump in throat
- Palpitation with slight anxiety
- Vertigo at night
- Weakness of lower extremities
- Miasm : Psora
- Thermal : hot

F. MIASMATIC ANALYSIS:

| | PSORA | SYCOSIS | SYPHILIS |
|---|---|---|---|
| Family History | Diabetes mellitus<br>Hypertension | | |
| Past History | Chicken pox<br>Typhoid fever<br>Jaundice | | |
| Mind | Weeps easily<br>Desire to travel | Desire for icy cold drinks | |
| Body | Weakness | Swelling of thyroid gland<br>Vertigo <night | |

MIASMATIC DIAGNOSIS: PSORA

G. TOTALITY OF SYMPTOMS

Weeps easily

Desire for travelling

Adjustable

Reduced appetite

Reduced thirst

Disturbed sleep

Sensation of lump in throat

Palpitation in anxiety

Vertigo at night

Weakness in lower extremities

Thermal reaction: hot

Miasm: Psora

H. HOMOEOPATHIC DIAGNOSIS

Chronic miasmatic disease psora

## 16 . SELECTION OF MEDICINE

**C. Non Repertorial Approach**

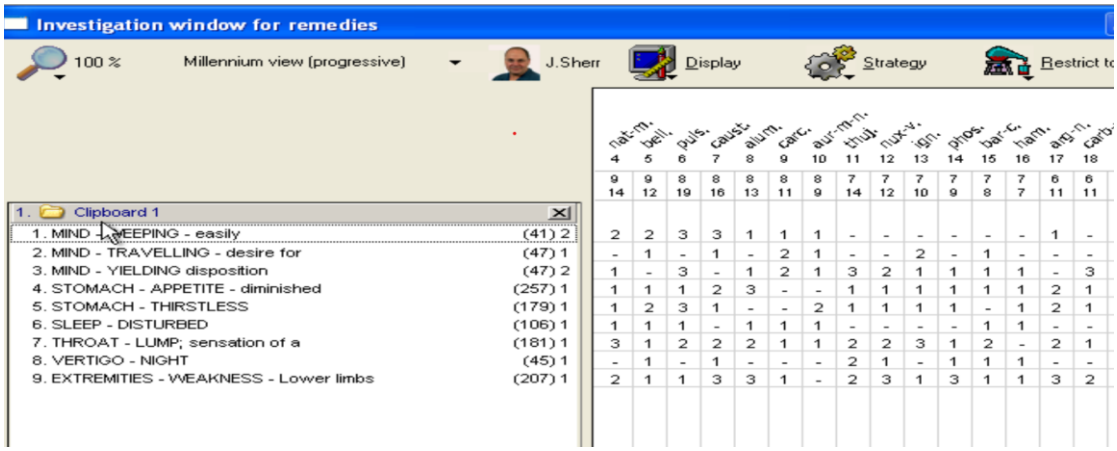
**D. Repertorial Approach**

**a)Repertorial Totality:** ( Selection of appropriate Repertory, Selection of symptoms for repertorisation, conversion of symptoms into corresponding rubrics for repertorisation)

| No | Symptoms | Rubrics | Explanation | Page No |
|---|---|---|---|---|
| 1 | Weeps easily | MIND – Weeping, easily | Mental general | |
| 2 | Desire for travelling | MIND- Travelling, desire for | Mental general | |
| 3 | Adjustable | MIND- Yielding disposition | Mental general | |
| 4 | Reduced appetite | STOMACH – Appetite, diminished | Physical general | |
| 5 | Reduced thirst | STOMACH – Thirstless | Physical general | |
| 6. | Disturbed sleep | SLEEP – Disturbed | Physical general | |
| 7 | Sensation of lump in throat | THROAT – Lump, sensation of a | Particular | |
| 8. | Palpitation with anxiety | CHEST – Palpitation of heart, anxiety, with | Particular | |
| 9. | Vertigo <night | VERTIGO – Night | Particular | |
| 10. | Weakness of lower extremities | EXTREMITIES- Weakness, lower limbs | Particular | |

b) **Repertorial result:**

| Medicine | Nat-m | Bell | Puls | Caust | Alum | Carc | Aur-m-n |
|---|---|---|---|---|---|---|---|
| Marks | 14 | 12 | 19 | 16 | 13 | 11 | 8 |
| No of Symptoms covered | 9 | 9 | 8 | 8 | 8 | 8 | 8 |




## 17. SELECTION OF POTENCY AND DOSE

**B. Potency -** According to the susceptibility of the patient **200$^{th}$ potency** is prescribed.

**B. Dose –** According to homoeopathic principle **single dose** is prescribed

## 18. PRESCRIPTION

$R_{X,}$

1. PULSATILLA 200 / 1D
2. B.PILLS 3xTDS
3. B DISC 1xTDS

X 2 weeks

## 19.GENERAL MANAGEMENT INCLUDING AUXILLARY MEASURES

**C. General/Surgical/Accessory:**

**D. Restrictions (Diet, Regimen etc.):**

| Disease | Medicinal |
|---|---|
| Advised to avoid<br>tapioca, cold exposure,<br>cabbage, radish, oily<br>foods.<br>Avoid stress and strain | Advised to avoid coffee ,fatty foods<br>Avoid other herbal soups. |

## 20. PROGRESS & FOLLOW UP

| DATE | INITIAL VISIT | | | | | | | | | | | PRESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **16/11/19** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | PULSATILLA 200/1D |
| | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | |
| | FOLLOW UP | | | | | | | | | | | |
| **25/11/19** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | PULSATILLA 200/1D |
| | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | |
| | Sensation of lump in throat is better, vertigo at night is better, palpitation persists the same, appetite remains diminished, weakness is better | | | | | | | | | | | |
| | FOLLOW UP | | | | | | | | | | | |
| **23/12/19** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | PULSATILLA 200/1D |
| | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | |
| | Sensation of lump in throat better than before<br>Swelling in neck persist the same, weakness is better, palpitation and vertigo is better, appetite has improved | | | | | | | | | | | |
| | FOLLOW UP | | | | | | | | | | | |
| **03/02/20** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | PULSATILLA 200/1D |
| | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | |
| | Swelling is the neck is better than before, palpitation is better, vertigo is better, thirst and appetite has improved, sleep is also better | | | | | | | | | | | |

# SAMPLE CASE 2

***"Case records are our valuable asset"***

**SARADA KRISHNA**

**HOMOEOPATHIC MEDICAL COLLEGE & HOSPITAL**

KULASEKHARAM, KANYAKUMARI DIST, TAMIL NADU- 629161

---

**CHRONIC CASE RECORD**

O.P No: 4846/18 UNIT: II A Date: 17/12/18

---

Name: Miss. JI

Age: 34yrs Sex: Female Religion: Hindu Nationality: Indian

Name of Father/Spouse/Guardian/Son/Daughter: Mr. Manikandan

Marital status: Married

Occupation: Coolie

Family size: 6 members

Diet: Mixed diet

Address: Manalikalavilai

Phone No (Mobile): 9791670544

**FINAL DIAGNOSIS:**

| | |
|---|---|
| Homoeopathic | **CHRONIC MIASMATIC DISEASE – SYCOSIS** |
| Disease | **HASHIMOTOS THYROIDITIS** |

| | | | | | |
|---|---|---|---|---|---|
| **RESULT:** | Cured | **Relieved** | Referred | Otherwise | Expired |

| 2. **INITIAL PRESENTATION OF ILLNESS** | | |
|---|---|---|
| PATIENT'S NARRATION (in the very expressions used by him/her) | PHYSICIAN,S INTEROGATION (details regarding symptoms narrated) | PHYSICIAN'S OBSERVATION |
| I am having swelling in the nec since 2 years. | What difficulty does it cause you?<br>I have a sensation of lump in the throat<br>Do you have any other associated complaint?<br>I have cough on and off with white expectoration.<br>Is there any other disturbing complaints?<br>I have difficulty in passing stool. | Lean<br>Dark complexion<br>Steady gait |

## 3. PRESENTING COMPLAINTS

| Location | Sensation | Modalities | Concomitants |
|---|---|---|---|
| Neck (since 3 years) | Sensation of lump in the throat<br>Difficulty in swallowing | < while eating | Tiredness sensation and weakness always present. |
| Respiratory tract ( since 2 years) | Ineffectual cough<br>White expectoration occasionally | < cold drinks<br>< exposure to cold air | |

## 4. HISTORY OF PRESENTING ILLNESS:

The patient complaint started gradually before 3 years as swelling in the throat. Initially she did not take any specific medication. Later she started with thyronorm 25mg. she did not take medicine regularly. Sometimes she takes it on and off. She also has complaints of ineffectual cough since 2 years with white expectoration. She has not taken any specific medication for this complaint.

## 5. HISTORY OF PREVIOUS ILLNESS

| S l No | Age/Year | Illness, trauma, fright, burns, drug allergy(ies), operation(s), exposure(s), inoculation, vaccination(s), serum, steroids, hormone therapy, antibiotics, analgesics, etc. | Treatment Adopted | Outcome |
|---|---|---|---|---|
| | | Nothing relevant | | |

## 6. HISTORY OF FAMILY ILLNESS

Father and mother–hypertension; sister - hypothyroidism

## 7. PERSONAL HISTORY

I. LIFE SITUATION

Place of birth: Ponmanai Caste:

Socio- economic status: moderate

Nutritional status: moderate

Dwelling: Ponmanai Customs: Nature of Work: manual

Political Status:

Religion: Hindu

Educational status: $10^{th}$ standard

Marital status: Married Year of Marriage: at 29 yrs of age

Family status: joint

Father: Alive Mother: Alive Siblings: 1 M: 0 F: 1 Children:2 (M)

J. HABITS & HOBBIES

Food: Non Vegetarian

Addictions: NP

Artistic: NP

Games/Sports: NP

K. DOMESTIC RELATIONS

With family members: Good

With other relatives: Good

With neighbours/friends/colleagues: Good

L. SEXUAL RELATIONS:

Pre-Marital: Marital: Extra Marital:
Others:

## 8. LIFE SPACE INVESTIGATION

The patient was born in a middle class family. She had one sister. She studied up to $10^{th}$ standard. She failed in $10^{th}$. She did not want to continue further because she had no interest. She tried to become police and wrote exam. She was selected but when she was called for, she did not have interest to go. She got married at the age of 29 years. She had 2 children.

She had a happy life. Her brother in law was working abroad and he came back diagnosed as renal failure. They had to spend a lot and the money they had was not enough. They had to borrow money from other people and also her husband asked her to give the jewels that she had. And also the house they lived in belonged to her husband and brother in law. To treat her son, patient's mother in law started planning to sell the house.

She had several fights with her mother in law, but the decisions made by her were not changed. Patient feels that there is nothing left for her children and her and feels very bad for giving her jewels off.

## 9. MENSTRUAL HISTORY:

A. Menses

L.M.P: 02/12/2018 Amenorrhoea-Primary/Secondary

| Cycle/Regularity &its Duration | Duration Of Menses | Flow | | | |
|---|---|---|---|---|---|
| | | Qty | Consistency &clots | Colour & odour | Stains &Acidity |
| 28-30 days | 2-3 days | Good flow | Not Clotted | Bright red | Nil |

**CONCOMITANTS**

| BEFORE | AT START OF | DURING | AFTER |
|---|---|---|---|
| | | | |

B. Previous History: Changes in Menstrual Cycle Menarche:

Early/Late

Early Years (first 3-4 Yrs) Before Marriage: FMP: 12years

After Pregnancy(ies) Recent Complaints related to Menarche

After Marriage

C. Climacteric:

Symptoms associated

| Pre-Menopause | With Menopause | Post Menopause |
|---|---|---|
| | | |

F. Abnormal Vaginal Discharges (Leucorrhoea/Lochia)

| Type | Quantity | Onset Duration | Color Odour | Stains Acridity | Relation with menses | Modalities | Accompaniments | Obvious reason if any |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**10. OBSTETICAL HISTORY**:

| Gravida | Para | Abortion | Death | Live |
|---|---|---|---|---|
| 2 | 2 | 0 | 0 | 2 |

**A. Previous Pregnancies Including Abortion:**

| No | Age of Conception | Yr. Date and Period Of Pregnancy | Abnormalities in Pregnancy & Treatment Adopted | Labour Events | Mode Of Delivery | Nature Of Perpeurium |
|---|---|---|---|---|---|---|
| 1 | 26 | 2009 | Nil | Normal | FTNVD | Normal |
| 2 | 28 | 2011 | Nil | Normal | FTNVD | Normal |

**Child**

| Gender | Birth Weight | Condition of Birth | Congenital Abnormality | Viability | Cause of Death | Lactation History |
|---|---|---|---|---|---|---|
| Male<br>Male | 3kg<br>2.4 kg | Stable<br>Stable | Nil<br>Nil | Viable<br>viable | | |

**B. Contraceptive method(s) adopted**

1. Temporary (used/in use/duration)

2. Permanent (changes of contraceptive method(s) and if so reason, any complaints from use)

**C. Present Pregnancy:** L.M.P Date of Quickening E.D.C

H/O Morning sickness

Other Complaints

**11. GENERAL SYMPTOMS:**

**A. PHYSICALS**

K. FUNCTIONAL

ix. Appetite : good, 3meals/day

x. Thirst : 8-9 glasses/day

xi. Sleep :5-6 hrs/ day, good sleep

xii. Dreams: NP

II. ELIMINATIONS

xiii. Stool : difficulty in passing, constipated stool

xiv. Urine : NP

xv. Sweat : generalised

xvi. Breath: NP

xvii. Discharges: NP

xviii. Abnormal Secretions & Excretions : NP

III. REACTIONS TO

| **REACTIONS TO** | **Aversions** | **Desire** | **Intolerance / Sensitive to** | **Aggravation** | **Amelioration** |
|---|---|---|---|---|---|
| Time | | | | | |
| Thermal | | | | | |
| Season | | Cold | | | |
| Meterological | | | | | |
| Moon Phase | | | | | |
| Places | | | | | |
| Air/Fanning | | Open air++ | | | |
| Clothing/ Covering | | | | | |
| Bathing/ Washing | | Cold | | | |
| Food/Drinks | | cold drinks+++, | | | |
| Undigested Food | | | | | |
| Touch/Pressure | | | | | |
| Posture | | Lying on back | | | |
| Motion | | | | | |
| Sleep | | | | | |
| Sex | | | | | |
| Spl.Senses | | | | | |
| Eliminations | | | | | |
| Menses | | | | | |

IV . CONSTITUTIONAL

| Physical Makeup | Temperament | Thermal | Side Affinity | Sensation/Tendencies |
|---|---|---|---|---|
| Oxygenoid | Melancholic | Hot | NP | NP |

**B. MENTAL GENERAL**

**1. Will & Emotions including motivations** ( Love, hate, anger, sadness, fear, fright, anxiety, suspicious, cause, modalities, state, aversion and cravings ( excluding food & drinks,) etc.

Consolation aggravates her

Desire for open air

Fear of being alone

**2. Understanding and Intellect** (perception, thinking, consciousness, decision, confidence, speech, motivation, cause, mental state)

Takes some time for understanding, conscious, indecisive

**3. Memory** (Effect on Behaviour & functions): weak memory

**12. PHYSICAL EXAMINATION**

A) GENERAL

- Conscious : conscious
- General appearance: good, dark complexion
- General built and nutrition: lean built
- Height: 159cm
- Weight: 55kg
- BMI:21.8kg/$m^2$
- Anaemia: present
- Jaundice: non-icteric
- Clubbing: Absent
- Cyanosis: Absent
- Oedema : Absent
- Nails: healthy
- Gait: steady

- Lymphadenopathy Nil:
- Pulse rate: 80 beats/min Resp Rate18/min: B.P: 114/80mm Hg
- Temp: 98.6 $^{0}$ F
- Others

**B.SYSTEMIC EXAMINATION**

21. Respiratory system: NAD
22. Cardiovascular system: inspection: no cyanosis, no clubbing, mild pallor present.
    Palpation: carotid pulse is normal, apex beat is normally felt, no tenderness
    Percussion: normal cardiac dullness hears\d,
    Auscultation: Normal heart sound S1 and S2 heard
23. Gastro Intestinal system: NAD
24. Urogenital system: NAD
25. Skin and glands :NAD
26. Musculoskeletal system: NAD
27. Central Nervous system: NAD
28. Endocrine: 1. NECK: (O/E)

    **Inspection:**

    Pizzillo's method: uniform bilateral swelling present.

    Swelling moves upwards on deglutition.

    No pressure on great veins.

    While protruding tongue, movement is normal

    **Palpation:**

    Lahey's method: solitary soft bilateral swelling.

    No palpable nodes felt.

    No pressure effects.

    Kocher's test: negative.

    No any engorgement of neck veins.

    Cervical lymph nodes are normal.

    **Auscultation:**

    No systolic bruit heard on examination of thyroid Gland

    Neck circumference : 35 cm
29. Eye and ENT: NAD
30. Others: NAD

**C.REGIONALS**

Tongue: Moist

Nail : healthy

Skin: dry

Scalp : dandruff

**13. LABORATORY FINDINGS**

**On 14/12/2019-**

T3 – 48.5 mg/dl;

T4 – 73.42 mg/dl

TSH – 52.70MIU/Ml;

TgAb –597.9IU/ml;

TPO – 141.3IU/ml ;

25(OH)D – 22.7ng/ml

USG THYROID: Both lobes of thyroid and isthmus are enlarged. Isthmus measures 10mm. parenchymal echo pattern appears heterogenous with multiple tiny hypoechoic micronodules. Echogenic transverse strands seen in parenchyma.

Impression: Autoimmune thyroiditis

**14. DIAGNOSIS**

- Provisional Diagnosis :
  HASHIMOTOS THYROIDITIS?
- Differential Diagnosis:
  HYPOTHYROIDISM
  HYPERTHYROIDISM
- Final Diagnosis (Disease):
  HASHIMOTOS THYROIDITIS

## 15 .DATA PROCESSING

C. ANALYSIS OF CASE

| COMMON | UNCOMMON |
|---|---|
| • Swelling of the neck<br>• Difficulty in swallowing<br>• Constipated stool++<br>• Weakness sensation every time<br>• Dryness of skin<br>• Ineffectual cough | • Ailments after giving away her jewels<br>• Consolation aggravation<br>• Fear of being alone<br>• Desire for cold food ++<br>• Desire for open air++<br>• white expectoration<br>• Sensation of lump in throat<br>• Thermal : hot |

D. EVALUATION OF SYMPTOMS/TOTALITY OF SYMPTOMS

- Ailments from giving away her jewels
- Fear of being alone
- Consolation aggravation
- Desire for open air
- Constipated stool
- Desire for cold drinks
- Sensation of lump in the throat
- White expectoration
- Profound weakness
- Miasm : sycosis
- Thermal : hot

I. MIASMATIC ANALYSIS:

| | PSORA | SYCOSIS | SYPHILIS |
|---|---|---|---|
| Family History | Hypertension | | |
| Past History | | | |

| | | | |
|---|---|---|---|
| Mind | Desire open air | Fear of being alone<br>Aliment from losing money<br>Consolation aggravates<br>Weak memory<br>Desire for icy cold drinks | |
| Body | Weakness | Swelling of thyroid gland | |

MIASMATIC DIAGNOSIS: SYCOSIS

J. TOTALITY OF SYMPTOMS

Ailments from giving away her jewels
Fear of being alone
Consolation aggravation
Desire for open air
Constipated stool
Desire for cold drinks
Sensation of lump in the throat
White expectoration
Profound weakness
Miasm : sycosis
Thermal : hot

K. HOMOEOPATHIC DIAGNOSIS

Chronic miasmatic disease sycosis

## 16 . SELECTION OF MEDICINE

### E. Non Repertorial Approach

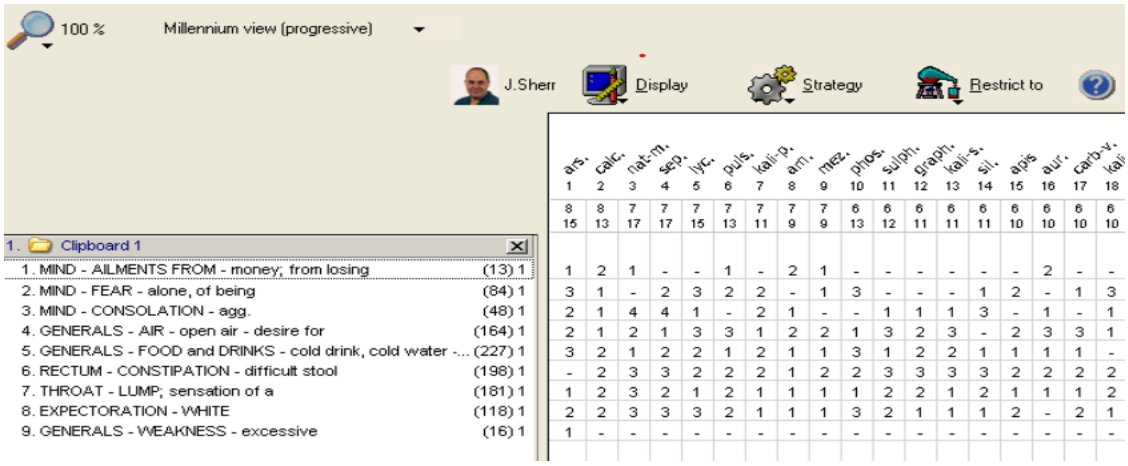
### F. Repertorial Approach

**a)Repertorial Totality:** ( Selection of appropriate Repertory, Selection of symptoms for repertorisation, conversion of symptoms into corresponding rubrics for repertorisation)

| No | Symptoms | Rubrics | Explanation | Page No |
|---|---|---|---|---|
| 1 | Ailments after giving her jewels | MIND-Ailments from, money, from losing | Mental general | |
| 2 | Fear of being alone | MIND- Fear, alone, of being | Mental general | |
| 3 | Consolation aggravates her | MIND-Consolation, agg | Mental general | |
| 4 | Desire for open air | GENERALS –Air, open air, desire for | Physical general | |
| 5 | Desire for cold drinks | GENERALS- Food and drinks- cold drinks, cold water, desire | Physical general | |
| 6. | Difficulty in passing stool, constipated | RECTUM – Constipation, difficult stool | Physical general | |
| 7 | Sensation of lump in throat | THROAT – Lump, sensation of a | Particular | |
| 8. | White expectoration | EXPECTORATION – white | Particular | |
| 9. | Profound weakness | GENERALS – Weakness, excessive | Particular | |

b) **Repertorial result:**

| Medicine | Ars | Calc | Nat-m | Sep | Lyc | Puls | Kali- p |
|---|---|---|---|---|---|---|---|
| Marks | 15 | 13 | 17 | 17 | 15 | 13 | 11 |
| No of Symptoms covered | 8 | 8 | 7 | 7 | 7 | 7 | 7 |




## 17. SELECTION OF POTENCY AND DOSE

**C. Potency -** According to the susceptibility of the patient **0/1 potency** is prescribed.

**B. Dose –** According to homoeopathic principle **minimum dose** is prescribed

## 18. PRESCRIPTION

$R_{X,}$

4. NATRUM MUR 0/1 / 2D (weekly once)
5. B.PILLS 3xTDS
6. B DISC 1xTDS

X 2 weeks

## 19.GENERAL MANAGEMENT INCLUDING AUXILLARY MEASURES

**E. General/Surgical/Accessory:**

**F. Restrictions (Diet, Regimen etc.):**

| Disease | Medicinal |
|---|---|
| Advised to avoid<br>tapioca, cold exposure,<br>cabbage, radish, oily<br>foods.<br>Avoid stress and strain | Advised to avoid coffee ,fatty foods<br>Avoid other herbal soups. |

## 20. PROGRESS & FOLLOW UP

| DATE | INITIAL VISIT | | | | | | | | | | | PRESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **16/11/19** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | NATRUM MUR |
| | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0/1 2D |
| | FOLLOW UP | | | | | | | | | | | |
| **04/01/20** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | NATRUM MUR |
| | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0/1 4D |
| | Sensation of lump in throat is better, Constipation persist the same, weakness in the same, and white expectoration is reduced. | | | | | | | | | | | |
| | FOLLOW UP | | | | | | | | | | | |
| **06/02/20** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | NATRUM MUR |
| | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0/1 4D |
| | Sensation of lump in throat better than before<br>Swelling in neck persist the same, weakness is better, Constipation is improved, frequency of cough reduced | | | | | | | | | | | |
| | FOLLOW UP | | | | | | | | | | | |
| **04/03/20** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | NATRUM MUR |
| | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0/2 4D |
| | Swelling is the neck is better than before, size is reduced to 37.2, constipation is better, cough is better, weakness sensation is also better. Patient generally feels better. | | | | | | | | | | | |

# APPENDIX- VII

## CASE SUMMARY

1. OP NO: 7789/19

Mrs.KR, female of age 29 years, came with complaints of Swelling of the thyroid gland, pain in the head on sun exposure, hair falling in spots and dandruffs. She is a person who expects perfection in all her works, have anxiety before doing any works, she has lack of self- confidence and gets irritable over small issues. She has profuse perspiration only in her head and also has desire for cold drinks. The rubrics that were selected are MIND- Fastidious,, MIND- Anxiety, anticipation, from, MIND – Confidence, want of self-confidence, MIND- Irritability, trifles from, HEAD- Perspiration of scalp, only the head, GENERALS – Food and drinks, cold drinks, cold water, desire, EXTERNAL THROAT- Swelling, thyroid gland, HEAD – Pain, sun exposure to, HEAD – Hair falling, spots, in, HEAD – Dandruff, white. After repertorisation using synthesis repertory, Phosphorous 0/1 was given as the remedy. She kept improving in her complaints and the potency was raised gradually. Her thyroglobulin antibody level reduced and her thyroid peroxidase value increased, TSH value also reduced. Vitamin D level has increased by 0.5ng/ml. Her Zulewski's score reduced from 7 to 4.

2. OP NO: 1248/19

Mrs.JL, female, of age 28 years, came with the complaints of goitre, on the right side, menses lasting for one day and weakness of the upper extremities. She always wanted people around her, weeps when she is alone, has fear of her condition and very sensitive to what others tell about her. She perspires profusely in the presence of unknown people and perspires profusely on her palms. Based on the synthesis repertory, the rubrics that were chosen are MIND- Company, desire for, MIND –Weeping, alone, when, MIND- Fear, disease, of impending, MIND- Sensitive, criticism to, PERSPIRATION –Strangers, in the presence of, EXTREMITIES- Perspiration, hand, palm, FEMALE GENETALIA – Menses, short, too, one day, EXTERNAL THROAT- Goitre, right and EXTREMITIES – Weakness, Upper arm. Sepia 0/1 was prescribed as the remedy, after 2 visits, the prescription was changed to natrum mur 200 and after 2 visits potency was increased to 1M.Her TSH, TPO and TgAb level has reduced. Vitamin D has reduce by 1.17ng/ml. Her Zulewski's score reduced from 8 to 5.

3. OP NO: 1973/19

Mrs.DS, female, of 32 years came with the complaints of hoarseness of her voice, difficulty in swallowing foods, sensation of some obstruction in the throat, palpitations that come suddenly and pain in the joints. She feels that she has been left alone, helpless and keeps thinking about what has happened to her. She wants to run away from everything. She has dry skin and has no perspiration. Based on synthesis repertory, the rubrics that were chosen are MIND- Forsaken feeling, MIND – Helplessness, feeling of, MIND – Brooding, MIND – Escape, attempts to, run away, SKIN – Dry, perspire,

inability to, LARYNX AND TRACHEA – Voice, hoarseness, THROAT – Swallowing, difficult, solids, CHEST- Palpitation of heart, appearing suddenly and EXTREMITIES- Pain, joints. Natrum Muriaticum 1M was prescribed ass the remedy. After two prescription of SL in her third visit, Natrum Muriaticum 1M was prescribed. Then for next two visits, SL was prescribed. Later Calcarea carb 1M was prescribed as the remedy which is complementary to Natrum mur. TSH and TPO level has reduced. TgAb level got increased slightly. Vitamin D has increased by 1.77ng/ml. Her Zulewski's score reduced from 9 to 5.

4. OP NO:1974/19

Miss.AS, female, of 14 years, came with the complaints of swelling of the thyroid gland, pain in both calf muscles, pain in the elbow joints and difficulty in swallowing foods. She has great interest in art works, loves to help others to the extreme and has fear of shadows. She also hass constipated stool and her appetite was reduced. Using synthesis repertory, the rubrics that were chosen are MIND- Art, ability, for, MIND- Benevolence, MIND- Fear, shadows, RECTUM- Constipation, difficult stool, STOMACH- Appetite, diminished, EXTREMITIES – Pain, aching, leg, calf, EXTTREMITIES- Pain, aching, elbow, EXTERNAL THROAT – Swelling, thyroid gland, GENERALS- Glands, of; hard, THROAT, Swallowing, difficult, solids. Calcarea iodatum 200 was prescribed as the remedy. The complaints of the patient were gradually reducing. TSH, TgAb and TPO level has reduced. Vitamin D level has slightly increased by 0.94ng/dl. Her Zulewski's score reduced from 6 to 3

5. OP NO: 1625/20

Mrs.AN, female, of 44 years came with the complaints of difficulty in swallowing foods, burning pain in the epigastric region, pain in the knee joints, hair fall and she has history of Diabetes mellitus. Complaints started after her grief from her daughter's abortion. She has fear of her disease and weeps easily. She has desire for cold drinks and has aversion for salt. Using the synthesis repertory, the rubrics that were chosen are MIND- Ailments from, grief, MIND – Fear, disease, of impending, MIND – Weeping, easily, GENERALS – Food and drinks, cold drinks, cold water, GENERALS- Food and drinks, salt, aversion, THROAT- Swallowing, difficulty, solids, STOMACH- Pain, burning, epigastrium, EXTREMITIES – Pain, knee and HEAD- Hair, falling. Phosphorous 0/1 was prescribed as the remedy. Patient's complaints were getting better. Her potency was increased in the following visits. TSH and TgAb level has reduced. TPO level has increased. Vitamin D level has slightly increased by 1.10ng/dl. Her Zulewski's score reduced from 8 to 5.

6. OP NO: 2538/18

Mrs.SV, female, of 33 years, came with complaints of swelling of the thyroid gland, weakness of the whole body and increase in body weight. She has grief about her alcoholic husband, fear of being alone, she weeps easily, has anxiety about the future of her family and also has fear of her disease condition. She has desire for cold drinks and cannot tolerate heat. Using synthesis repertory, the rubrics that were chosen are MIND –

Grief, MIND- Fear, alone, of being, MIND – Weeping, easily, MIND- Anxiety, future about, MIND – Fear, disease of impending, GENERALS – Food and drinks, cold drink, cold water, desire, GENERALS – Warm, agg, EXTERNAL THROAT – Swelling, Thyroid gland, GENERALS – Obesity and GENERALS – Weakness. Natrum Muriaticum 0/1 was given as the prescription.in her next visit the potency was raised to 0/3. Thuja 200 was given as an intercurrent. Later again, Natrum Muriaticum 0/5 was prescribed. TSH, TgAb and TPO level has reduced. Vitamin D level has slightly increased by 1.5ng/dl. Her Zulewski's score reduced from 7 to 3

7. OP NO: 5150/17

Mrs.VJ , female, of 40 years, came with complaints of swelling of the thyroid gland, sensation of lump in the throat, cough with white expectoration which is more at night, weakness of the whole body and gaining of weight. She is religious and consolation ameliorates her. She has reduced appetite, irregular menses and she cannot take cold. Using synthesis repertory, the rubrics that were chosen are MIND- Religious affections, too occupied with religion, MIND – Consolation, amel, STOMACH- Appetite, diminished, FEMALE GENETALIA – Menses, irregular, GENERALS – Cold, becoming cold, after, agg. EXTERNAL THROAT – Swelling, thyroid gland. THROAT – Lump, sensation, of a. COUGH- Loose, night. EXPECTORATION – White, GENERALS – Weakness, excessive and GENERALS – Obesity. Spongia 30 was initially prescribed ass the first prescription. In the following visits calcarea carb 200 was prescribed in every visit. TSH and TPO level has reduced. TgAb level has increased. Vitamin D level has slightly increased by 1.2ng/dl. Her Zulewski's score reduced from 7 to 4.

8. OP NO: 7533/17

Mrs.SA, female of age 57, came with the complaints of swelling of the thyroid gland, palpitation while walking, weakness of the whole body, dimness of vision and constipated stool. She has an inferior feeling, grief that her son has no child, constant sadness persists in her and when she gets angry, it ends in weeping. She also cannot tolerate heat. Using synthesis repertory, the rubrics that were chosen are MIND – Confidence, want of self-confidence, MIND – Grief, MIND –Sadness- gloomy, MIND- Weeping, anger, during, RECTUM – Constipation, difficult stool, GENERALS –Warm,agg, EXTERNAL THROAT – Swelling, thyroid gland, CHEST – Palpitation of heart, walking, GENERALS – Weakness and Vision – Dim. Natrum Muriaticum 0/1 was given as the remedy. In the second visit, Thuja 200 was given as an intercurrent remedy. In the following follow ups, the potency was increased to 0/3. TSH and TPO level has reduced. TgAb level has increased. Vitamin D level has slightly increased by 1.4ng/dl. Her Zulewski's score reduced from 9 to 4.

9. OP NO: 609/20

Mrs.MR, female, of 32 years, came with complaints of swelling of the thyroid gland, puffiness of the face, pain in the epigastric region, frothy type of vomiting, difficulty in breathing, heaviness of chest while respiration, pain in the cervical region and weakness of her body. She has a long standing grief about her mother's death. She also has intolerance to cold and incontinence of urination. Using Synthesis repertory, the rubric that were chosen are, MIND – Grief, prolonged,

GENERALS – Cold, becoming cold, after, agg, BLADDER –Urination, involuntary, EXTERNAL THROAT – Swelling, thyroid gland, Face- Swelling, STOMACH – Pain, epigastrium, STOMACH – Vomiting, type of, frothy, RESPIRATION – Asthmatic, thyroid, complaints of, CHEST- Oppression, respiration, BACK- Pain, cervical region, GENERALS – Obesity and GENERALS – Weakness. The remedy prescribed to her was natrum Muriaticum 0/3. She was given Thuja 200as intercurrent remedy and in the following visits the potency of Naatrum Mur was raised to 0/5. TSH, TgAb and TPO level has reduced. Vitamin D level has slightly increased by 2.2ng/dl. Her Zulewski's score reduced from 10 to 6.

10. OP NO: 4605/15

Mrs.CR, female, of 35 years, came with the complaints of swelling of the thyroid gland, severe pain in throat while swallowing food, hair fall and extreme tiredness always. She gets easily anxious over small issues, prefers to be alone, does not like to be contradicted and does not like to be consoled. She has desire for salt and has no perspiration. Using synthesis repertory, the rubrics that were chosen are, MIND- Anxiety, trifles, about, MIND – Company, aversion to – desire for solitude, MIND – Contradiction, intolerant of contradiction, MIND – Consolation, agg, GENERALS – Food and drinks, salt, desire, SKIN- Dry, perspire, inability to, EXTERNAL THROAT – Swelling, thyroid gland, THROAT – Pain, swallowing food, HEAD – Hair, falling and GENERALS – Weariness, chronic. Lycopodium 0/1 was given as the remedy. In the following visit IODUM 1M was given as antipsoric remedy. In the following visits Lycopodium was given increased potency. TSH, TgAb and TPO level has reduced. Vitamin D level has slightly reduced by 0.8ng/dl. Her Zulewski's score reduced from 6 to 3.

11. OP NO:6978/19

Mrs.RJ, female, of 34 years came with the complaints of swelling of the thyroid gland, hoarseness of voice, numbness of the hands, distension of abdomen after eating and pain in the heel. She has grief of her father's death, wants to have someone always with her, fear of being alone and weeps easily. She has desire for sweets. Using synthesis repertory, the rubrics that were chosen are, MIND – Grief, MIND- Company- desire for, MIND- Fear, alone, of being, MIND –Weeping easily, EXTERNAL THROAT – Swelling , thyroid gland, LARYNX AND TRACHEA- Voice, hoarseness, EXTREMITIES- Numbness, Hand, ABDOMEN –Distension, eating, after and EXTREMITIES, Pain, heel. Pulsatilla 200 was given as the remedy. In her 3$^{rd}$ visit, thuja 200 was given as an antisychotic remedy. In her 6$^{th}$ visit the potency of Pulsatilla was changed to 1M. TSH and TgAb levels have reduced. TPO level has slightly increased. Vitamin D level has slightly increased by 1.9ng/dl. Her Zulewski's score reduced from 9 to 7.

12. OP NO: 8006/19

Mrs.MD, female, of age 38, came with the complaints of pain in the lumbar region while standing, frequent muscular cramps, hard swelling in the throat and pain while swallowing food which gets ameliorated when drinking. She is not able to remember things when thinking too much, has desire to be alone and has aversion to coition. She has headache before menses, she cannot tolerate cold environment and has intolerance to milk products. Using synthesis repertory, the rubrics that were chosen are, MIND- Forgetful, mental

exertion, from, MIND – Company, aversion to, desire for solitude, FEMALE GENETALIA – Coition, aversion to, HEAD-Pain, menses, before, GENERALS- Cold, becoming cold, after, agg, GENERALS – Food and drinks, milk, agg, BACK- Pain, lumbar region, standing, GENERALS – Pain, cramping, muscles, GENERALS- Swelling, glands, of, hard, THROAT – Pain, swallowing, food and THROAT – Pain, drinking, amel. Calcarea iodatum 30 was prescribed as the remedy. Later the potency was increased to 200 and one dose of sepia 200 was prescribed in her 5$^{th}$ visit. TSH and TgAb levels were reduced. TPO level was already normal and maintained the same. Vitamin D level has reduced by 0.23ng/ml. Her Zulewski's score reduced from 9 to 6.

13. OP NO: 7490/19

Mrs.SD, female, 35 years of age, came with the complaints of frequent palpitation with anxiety, vertigo especially at night, sensation of lump in the throat and weakness of lower extremities. She has constant desire to travel, very adjustable, weeps easily. Her appetite and thirst were reduced. Sleep was also disturbed. Using synthesis repertory, the rubrics that were chosen are MIND- Travelling, desire for, MIND- Yielding disposition, MIND – Weeping, easily, STOMACH – Appetite, diminished, STOMACH – Thirstless, SLEEP – Disturbed, CHEST – Palpitation of heart, anxiety, with, VERTIGO – Night, THROAT – Lump, sensation of a and EXTREMITIES- Weakness, lower limbs. Pulsatilla 200 was prescribed as the remedy. Patient gradually improved in the same potency with SL in between. TSH, TgAb and TPO levels were reduced. Vitamin D level has increased by 1.05ng/ml. Her Zulewski's score reduced from 5 to 3.

14. OP NO: 5539/18

Mrs. TI, female, 60 years of age, came with the complaints of difficulty in breathing which aggravates in cold exposure, swelling of the thyroid gland, difficulty in swallowing food, pain in the knee joint while rising from the seat and passes stool after food. She gets irritated easily and desires consolation. She has reduced appetite and perspires profusely at night. Using synthesis repertory, the rubrics that are chosen are, MIND- Irritability – easily, MIND- Consolation – amel, STOMACH- Appetite , diminished, PERSPIRATION- Profuse, night, STOOL – eating, after, RESPIRATION – Difficult –cold, talking, after, EXTERNAL THROAT – Swelling, thyroid gland, THROAT – Swallowing, difficult, solids and EXTREMITIES –Pain, knee, rising, seat, from a. Natrum Muriaticum 0/1 was given as the prescribed remedy. The potency was increased in the following visits. TSH, TPO and TgAb levels have reduced.. Vitamin D level has increased by 1.4ng/ml. Her Zulewski's score reduced from 8 to 5.

15. OP NO: 4627/19

Mrs. LA, female, 41 years of age, came with the complaints of swelling in the throat, palpitations in the morning, Hot flushes on and off, Vertigo while in bed, Distension of abdomen and loud eructation. She has sympathy towards others and dwells over the past memories. She has desire for cold drinks and has profuse sweating in the head. Using synthesis repertory the rubrics that were chosen are, MIND- Sympathetic, MIND –Dwells past disagreeable occurrences, on, GENERALS – Food and drinks – cold food, desire, HEAD- Perspiration of scalp only the head, SLEEP – Disturbed, EXTERNAL THROAT –Swelling, thyroid gland, CHEST – Palpitations of heart, morning, GENERALS – Heat, flushes of, VERTIGO – Bed, in, agg, ABDOMEN – Distension, hypogastrium and STOMACH – Eructation, type of, loud. Causticum

200 was prescribed as the remedy. The same potency was given in every visit. TSH, TgAb and TPO levels were reduced. Vitamin D level has reduced by 1.4ng/ml. Her Zulewski's score reduced from 8 to 4.

16. OP NO: 1846/18

Mrs. JI, female, 34 years of age, came with the complaints of sensation of lump in the throat, Cough with white expectoration and weak feeling all over the body. She has grief about losingn money in business, fear of being alone and consolation aggravation. She has desire for cold drinks, open air and has difficulty in passing stool. Using synthesis repertory, the rubrics that were chosen are, MIND-Ailments from, money, from losing, MIND- Fear, alone, of being, MIND-Consolation, agg, GENERALS –Air, open air, desire for, GENERALS- Food and drinks- cold drinks, cold water, desire, RECTUM – Constipation, difficult stool, THROAT – Lump, sensation of a, EXPECTORATION – white and GENERALS –Weakness, excessive. Natrum muriaticum 0/1 was prescribed as the remedy. In the following follow ups the potency was gradually increased to 0/4. TSH and TPO levels have reduced. TgAb level has increased. Vitamin D level has increased by 1.3ng/ml. Her Zulewski's score reduced from 10 to 7.

17. OP NO:4761/18

Miss.MK, female, 13 years of age came with the complaints of swelling in the throat, Hoarseness of voice and falling of hair present. She has fear of darkness, becomes violent when angry, weeps during anger and has dreams of dead people. She has reduced appetite and has profuse perspiration in palms and soles. Using synthesis repertory , the rubrics that were chosen are MIND- Fear, dark, of, MIND – Anger, violent, MIND- weeping, anger, during, DREAMS-Dead bodies, STOMACH – Appetite, diminished, EXTREMITIES –Perspiration, hand, palms, EXTREMITIES – Perspiration, foot, sole, EXTERNAL THYROID – Swelling, thyroid gland, LARYNX AND TRACHEA – Voice – hoarseness and HEAD – Hair, falling. Calcarea iodatum 30 was prescribed as the remedy. Psorinum 1M was gien as the intercurrent remedy and potency was increased to 200. TSH, TgAb and TPO levels have reduced. Vitamin D level has increased by 1.3ng/ml. Her Zulewski's score reduced from 5 to 2.

18. OP NO: 3700/19

Mrs.GP, female, 50 years of age, came with complaints of swelling of thyroid gland, Pain in the shoulder joints at night, Pain in lumbar region while standing, Pain in the knee joints and increase in weight. She has anxiety about financial issues, has a helpless feeling and cannot tolerate cold. Using synthesis repertory, the rubrics that were chosen are MIND-Anxiety, money matters, about, MIND – Helplessness, feeling of, GENERALS – Cold, becoming cold, after, agg, EXTERNAL THROAT – Swelling, thyroid gland, EXTREMITIES –Pain, shoulder, right, BACK – Pain, lumbar region, standing, EXTREMITIES –Pain, knee and GENERALS –Obesity. Calcarea car 0/1 was given as the remedy. Sulphur 200 was given as an intercurrent remedy. The potency was gradually raised to 0/3. TSH and TgAb levels have reduced. TPO level has increased. Vitamin D level has increased by 0.76ng/ml. Her Zulewski's score reduced from 9 to 5.

19. OP NO:3090/20

Mrs. FT, female, 34 years of age, came with complaints of swelling of the thyroid gland, Falling of hair, Vertigo especially in the morning, while waking and numbness of the feet on and off. She has

constant grief about the problems in the family, feels that she has no one t care for her and consolation ameliorates her. She has irregular menses, her leucorrhoea is offensive, intolerance of heat and sweats profusely. Using synthesis repertory, the rubrics that were chosen are, MIND – Grief, prolonged, MIND- Forsaken feeling, beloved by his parents, wife, friends, feeling of not being, MIND- Consolation, amel, FEMALE GENETALAI – Menses, irregular, FEMALE GENETALIA – Leukorrhea, offensive, GENERALS –Warm, agg, PERSPIRATION- Profuse, EXTERNAL THROAT- Swelling, thyroid gland, HEAD – Hair, falling, VERTIGO –Morning, waking on and EXTREMITIES – Numbness, foot. Natrum muriaticum 200 was prescribed as the remedy. Potency was maintained the same. TSH and TgAb levels have reduced. TPO level has increased. Vitamin D level has reduced by 0.3ng/ml. Her Zulewski's score reduced from 10 to 7.

20. OP NO: 4807/18

Mrs.SA, female, 26 years of age, came with the complaints of swelling of thyroid gland, frequent Sneezing, Discharge is thick and Pain in the head while sneezing. Complaints started after disappointed love, she gets angered easily. She has deire for cold drinks, sweets and has intolerance to cold air. Using synthesis repertory, the rubrics that were chosen are, MIND – Aliments from, love, disappointed, MIND- Anger, easily, GENERALS – Food and drinks , cold drinks, cold water, desire, GENERALS – Food and drinks, sweets, desire, GENERALS – Cold, air, agg, EXTERNAL THROAT – Swelling, thyroid gland, NOSE- Sneezing, frequent, NOSE- Discharge, thick AND HEAD – Pain, sneezing. The remedy that was prescribed is phosphorous 0/1. Sulphur 200 was given as intercurrent in the middle. The potency was increased to 0/3 in the following follow ups. TSH and TPO levels have reduced. TgAb level has increased. Vitamin D level has increased by 1.4ng/ml. Her Zulewski's score reduced from 9 to 6

21. OP NO:3877/18

Mrs.NS, female, 19 years of age, came with the complaints of irregular menses, menses was prolonged, Catches cold easily, Swelling of the thyroid gland and weakness of the body at night and obesity. She is an introvert and has fear of darkness. She cannot concentrate properly and has desire for sweets. Using synthesis repertory, the rubrics that were chosen are, MIND – RESERVED, MIND- Fear, dark of, MIND- Concentration, difficult, FEMALE GENETALIA – MENSES –irregular, FEMALE GENITALIA – Menses – protracted, GENERALS –Cold, take cold, tendency to, GENERALS – Food and drinks , sweets, desire, EXTERNAL THROAT – Swelling, thyroid gland, GENERALS-Weakness, night and GENERALS – Obesity. Calcarea carb 0/1 was prescribed as the remedy. The potency was raised to 0/3 in the following visits. TSH, TgAb and TPO levels have reduced. Vitamin D level has increased by 2.2ng/ml. Her Zulewski's score reduced from 6 to 3.

22. OP NO: 3568/19

Mrs. NA, female, 29 years of age came with the complaints of swelling of the thyroid gland, Hoarseness of voice, aching pain in both knee joint and Gaining of weight. She gets angry violently, consolation aggravates her and she is obstinate. Her menses is scanty, has pain in the lumbar region during menses and there is profuse leucorrhoea before menses. Using synthesis repertory, the rubrics that were chosen are MIND- Anger , violent, MIND-Consolation, agg, MIND – Obstinate, FEMALE GENITALIA – Menses, scanty, BACK –Pain, lumbar region,

menses, during, FEMALE GENETALIA – Leukorrhea, copious, menses, before, EXTERNAL THROAT – Swelling, thyroid gland, LARYNX AND TRACHEA – Voice, hoarseness, EXTREMITIES –Pain, aching, knee and GENERALS- Obesity. Calcarea carb 0/1 was prescribed as the remedy. The potency was raised to 0/6 in the following visits. TSH and TgAb levels have reduced. TPO level has increased. Vitamin D level has increased by 2.7ng/ml. Her Zulewski's score reduced from 8 TO 4.

23. OP NO: 6680/18

Mrs.SR, female, 48 years of age, came with the complaints of Swelling of the thyroid gland, Sensation of lump in the throat, Distension of the abdomen in evening and sour eructation. She is fastidious, too responsible and has anxiety about health. She has desire for spicy food and has constipated hard stool. Using synthesis repertory, the rubrics that were selected are, MIND – Fastidious, MIND – Responsibility, taking responsibility too, seriously, MIND –Fear, failure of, MIND –Anxiety , about, own health, one's, GENERALS – Food and drinks, spices, desire, STOOL – Hard, EXTERNAL THROAT – Swelling, thyroid gland, THROAT – Lump, sensation of a, ABDOMEN – Distension, evening and STOMACH –Eructations, type of, sour. Lycopodium 0/1 wa prescribed as the remedy. The potency was gradually increased to 0/3. TSH and TPO levels have reduced. TgAb level has increased. Vitamin D level has reduced by 1.1ng/ml. Her Zulewski's score reduced 10 to 6.

24. OP NO: 5878/18

Mrs.BY, female, 42 years of age came with the complaints of Swelling of the thyroid gland painful, Constriction feeling in the throat, Difficulty in breathing and palpitation at night. She has grief of the death of her husband; she is revengeful and has heat flushes that occur suddenly. She has intolerance to heat and has cold sweating over the face. Using synthesis repertory, the rubrics that were chosen are, MIND- Grief, prolonged, MIND- Malicious, GENERALS- Heat, flushes of, GENERALS – Warm, agg, FACE- Perspiration, cold, EXTERNAL THROAT –Pain, thyroid gland, THROAT- Constriction, RESPIRATION – Difficult and CHEST – Palpitation of heart, night. Lachesis 0/1 was prescribed as the remedy. The potency was raised to 0/2 in the following visits. TSH, TgAb and TPO levels have reduced. Vitamin D level has increased by 1.6ng/ml. Her Zulewski's score reduced from 7 to 3.

25. OP NO: 9071/18

Mrs.SNA, female, 29 years of age, came with the complaints of pain in throat while swallowing food, Heaviness sensation in throat, burning sensation in throat, Nausea feeling and palpitation on and off. She wants to be cared, she is basically introverted. She has watery leucorrhoea and reduced appetite. Using synthesis repertory, the rubrics that were chosen are MIND- Caressed, being, want to be caressed, MIND –Reserved, FEMALE GENETALIA – Leukorrhea, thin, STOMACH –Appetite, diminished, THROAT –Pain, swallowing, food, THROAT –Heaviness, THROAT – Pain, burning, STOMACH – Nausea, throat, in and CHEST – Palpitation of heart, appearing, suddenly. Lycopodium 30 was prescribed as the remedy. Sulphur 200 was given as intercurrent remedy. Then the potency was raised to 200. TSH and TPO levels have reduced. TgAb level has increased. Vitamin D level has increased by 1.4ng/ml. Her Zulewski's score reduced from 7 to 4.

26. OP NO: 11307/18

Mrs.PA, female, 40 years of age, came with the complaints of Swelling of the thyroid gland, Pain in the elbow joint, Pain in the ankle joint, Obesity and weakness of the body. She regrets that she has committed mistake and broods over the past. She has intolerance to cold, reduced thirst and has dream of death. Using synthesis repertory, the rubrics that were chosen are, MIND – Remorse, MIND- Brooding, GENERALS – Cold, becoming cold, after, agg, STOMACH – Thirstless, DREAM – Death, EXTERNAL THROAT – Swelling, thyroid gland, EXTREMITIES – Pain, elbow, EXTREMITIES –Pain, ankle and GENERALS – Obesity. Calcarea carb 30 was prescribed as the remedy. Sulphur 30 was given as the intercurrent remedy and the potency was raised to 200 in the last visit. TSH, TgAb and TPO levels have reduced. Vitamin D level has increased by 0.16ng/ml. Her Zulewski's score reduced from 7 to 3.

27. OP NO: 9438/17

Mrs.SK, female, 28 years of age, came with the complaints of sleepiness all day, Difficulty in passing stool, Sensation of lump in throat, Constricted feeling in the throat, Constant continuous, yellow expectoration and pain in the head during cough. She has grief that she has moved to another place, she loves to help others, does not like to talk much and has aversion for contradiction. Using synthesis repertory, the rubrics that were chosen are, MIND – Grief, silent, MIND- Sympathetic, MIND –Taciturm, MIND- Contradiction, intolerant of contradiction, SLEEP – Sleepiness, constant, RECTUM – Constipation, difficult stool, THROAT – Lump, sensation of a, COUGH –Constant, EXPECTORATION –Yellow and HEAD – Pain, coughing, on. Ignatia 1M was prescribed as the remedy. Few doses of SL were given with another dose of Ignatia 1M in-between. TSH and TgAb levels have reduced. TPO level has increased. Vitamin D level has increased by 1.3ng/ml. Her Zulewski's score reduced from 8 to 5.

28. OP NO:2659/19

Mrs. AA, female, 32 years of age came with complaints of irregular menses, Lower abdominal pain during menses, Dark clots in menses, Headache before menses and constriction sensation of the throat. She has hatred toward her family members, had deep feeling of insult. She has intolerance to heat and reduced appetite. Using synthesis repertory the rubrics that were chosen are, MIND – Hatred, MIND – Indignation, GENERALS – Warm, agg, STOMACH – Appetite, diminished, FEMALE GENETALIA- Menses, irregualar, ABDOMEN – Pain, Hypogastrium, menses, during, FEMALE GENETALIA – Menses, clotted, dark clots, HEAD –Pain, menses, before and THROAT – Constriction. Lachesis 0/1 was prescribed as the remedy. The potency was gradually raised to 0/3. TSH, TPO and TgAb levels have reduced. Vitamin D level has increased by 1.2ng/ml. Her Zulewski's score reduced from 5 to 2.

29. OP NO; 4826/17

Mrs.PK, female, 42 years of age, came with the complaints of pain in the temples on and forehead on and off, Pain after exposure in sun, Pain in the throat while swallowing food, Stitching pain in both knee joint and weakness of lower limbs. She has anxiety about future, is adjustable with others and a cheerful person. She has cold perspiration on her face and catches cold easily. Using synthesis repertory, the rubrics that were chosen are, MIND- Anxiety, future about, MIND –

Yielding disposition, MIND – Cheerful, FACE – Perspiration, cold, GENERALS – Cold, tale cold, tendency to, HEAD – Pain, Temples and forehead, Head – Pain, sun, from exposure to, THROAT – Pain, swallowing, food, EXTREMITIES – Pain, stitching, knee and EXTREMITIES – Weakness, lower limbs. Phosphorous 200 was prescribes as the remedy. The potency was maintained the same. . TSH, TgAb and TPO levels have reduced. Vitamin D level has increased by 1.1ng/ml. Her Zulewski's score reduced from 9 to 6.

30. OP NO: 4425/17

Mrs.JK, female, 36 years of age, came with the complaints of obstructed sensation in the throat, Difficulty in breathing while lying down, Pain in the cervical region when turning head, Palpitations at night and obesity. She is an introvert, obstinate and prefers to be alone. Her appetite is reduced, has sleepiness all day and has prolonged menses. Using synthesis repertory, the rubrics chosen were MIND – Reserved, MIND – obstinate, MIND – Company, aversion to, desire for solitude, STOMACH – Appetite, diminished, SLEEP – Sleepiness, constant, FEMALE GENETALIA – Menses, protracted, THROAT – Obstruction, RESPIRATION – Difficult, lying, while, BACK- Pain, cervical – turning head, CHEST- Palpitation of heart, night and GENERALS – Obesity. Calcarea carb 0/3 was prescribed as the remedy. The potency was later increased to 0/5. TSH, TgAb and TPO levels have reduced. Vitamin D level has increased by 0.2g/ml. Her Zulewski's score reduced from 7 to 3.

# APPENDIX – VIII

## MASTER CHART

| SL.NO | PRELIMINARY DATA OF THE PATIENT | TOTALITY OF SYMPTOMS | RUBRICS | TSH,TP0, TgAb, 25(OH)D (BFT) | SCORE | REMEDY | TSH,TP0, TgAb, 25(OH)D (AFT) | SCORE | INFERENCE |
|---|---|---|---|---|---|---|---|---|---|
| **1.** | Name:Mrs.KR<br>Age:29 Yrs<br>Sex: Female<br>Occupation: Teacher<br>Address: Mulavilai, veeyanoor | Needs perfection in her works,<br>Anxiety before doing anything,<br>Lack of self-confidence,<br>Gets irritable over small issues,<br>Profuse perspiration in the head,<br>Desire for cold drinks,<br>Swelling of thyroid gland<br>Pain in head on sun exposure,<br>Hairfalling in spots.<br>White dandruff<br>Miasm: Psora | MIND- Fastidious,<br>MIND- Anxiety, anticipation, from<br>MIND – Confidence, want of self confidence<br>MIND- Irritability, trifles from<br>HEAD- Perspiration of scalp, only the head<br>GENERALS – Food and drinks, cold drinks, cold water, desire<br>EXTERNAL THROAT- Swelling, thyroid gland<br>HEAD – Pain, sun exposure to<br>HEAD – Hair falling, spots, in<br>HEAD – Dandruff, white | TSH – 11.02MIU/L<br>TgAb – 760IU/ml<br>TPO – 154IU/ml<br>25(OH)D – 30.2ng/ml | 7 | Phosphorus 0/1 | TSH – 7.83MIU/ml<br>TgAb – 436.80 IU/ml<br>TPO – 309IU/ml<br>25(OH)D- 30.7ng/ml | 4 | Moderate improvement<br><br>Vitamin D value is almost the same. Slightly increased |
| **2.** | Name:Mrs.JL<br>Age:28 Yrs<br>Sex: Female<br>Occupation: Housewife<br>Address: Gnanam, Andharapuram | Desires for people around<br>Weeps when she is alone<br>Fear of the disease condition<br>Sensitive to what others tell about her | MIND- Company, desire for<br>MIND –Weeping, alone, when<br>MIND- Fear, disease, of impending<br>MIND- Sensitive, criticism to | TSH – 43.9MIU/ml<br>TgAb – 607.70 IU/ml<br>TPO – 121.90IU/ml<br>25(OH)D – 16.42ng/ml | 8 | Sepia 0/1 | TSH – 5.17MIU/ml<br>TgAb – 44.23IU/ml<br>TPO – 81.70IU/ml<br>25(OH)D – 15.59ng/ml | 5 | Moderate improvement<br><br>Vitamin D value is slightly reduced |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Perspires profusely when unknown people are there around<br>Perspires in the palms<br>Menses lasts for only one day<br>Goitre in the right side<br>Weakness of the upper arms<br>Miasm: Psora | PERSPIRATION – Strangers, in the presence of<br>EXTREMITIES- Perspiration, hand, palm<br>FEMALE GENETALIA – Menses, short, too, one day<br>EXTERNAL THROAT- Goitre, right<br>EXTREMITIES – Weakness, Upper arm | | | | | | |
| **3.** | Name:Mrs.DS<br>Age:32 Yrs<br>Sex: Female<br>Occupation: Housewife<br>Address: Ummanchavilai, Mekkanadapam | Feels that she has been left alone<br>Helpless feeling<br>Keeps thinking about what has happened to her<br>Wants to run away<br>No perspiration<br>Hoarseness of Voice<br>Difficulty in swallowing food<br>Sensation of obstruction in throat<br>Palpitations happen suddenly<br>Pain in joints<br>Dry skin<br>Miasm: Sycosis | MIND- Forsaken feeling<br>MIND – Helplessness, feeling of<br>MIND – Brooding<br>MIND – Escape, attempts to, run away<br>SKIN – Dry, perspire, inability to<br>LARYNX AND TRACHEA – Voice, hoarseness<br>THROAT – Swallowing, difficult, solids<br>CHEST- Palpitation of heart, appearing suddenly<br>EXTREMITIES- Pain, joints | TSH – 15.08MIU/ml<br>TgAb – 49.69IU/ml<br>TPO – 573.10IU/ml<br>25(OH)D – 23.23ng/ml | 9 | Natrum Muriaticum 1M | TSH – 10.52MIU/ml<br>TgAb – 50.77IU/ml<br>TPO – 329.0IU/ml<br>25(OH)D – 25.0ng/ml | 5 | Moderate improvement<br><br>Vitamin D value has increased |
| **4.** | Name: Miss..AS<br>Age:14 Yrs<br>Sex: Female<br>Occupation: | Interested in art works<br>Loves to help others to the extreme<br>Fear of shadows<br>Constipated stool | MIND- Art, ability, for<br>MIND- Benevolence<br>MIND- Fear, shadows<br>RECTUM- Constipation, difficult stool | TSH – >100MIU/ml<br>TgAb – 103.5IU/ml<br>TPO – | 6 | Calcarea iodatum 200 | TSH – 8.17MIU/ml<br>TgAb – 41.05IU/ml<br>TPO – | 3 | Marked improvement<br><br>Vitamin D value is almost the |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Student<br>Address:<br>Ummanchavilai,<br>Mekkanadapam | Appetite: reduced<br>Pain in both calf muscles<br>Pain in elbow joints<br>Swelling of thyroid gland, hard<br>Difficulty in swallowing solid foods | STOMACH- Appetite, diminished<br>EXTREMITIES – Pain, aching, leg, calf<br>EXTTREMITIES- Pain, aching, elbow<br>EXTERNAL THROAT – Swelling, thyroid gland<br>GENERALS- Glands, of; hard<br>THROAT, Swallowing, difficult, solids | 564.1IU/ml<br>25(OH)D – 24ng/ml | | | 279.0IU/ml<br>25(OH)D – 24.94 ng/ml | | same. Slightly raised |
| **5.** | Name:<br>Mrs..AN<br>Age:44 Yrs<br>Sex: Female<br>Occupation: Housewife<br>Address:<br>Chenkaravilai, neyyor | Complaints after grief about her daughter's abortion<br>Fear of her disease<br>Weeps easily<br>Desire for cold drinks<br>Aversion to salt<br>Difficulty in swallowing foods<br>Burning pain in the epigastric region<br>Diabetes mellitus<br>Pain in her knee joint<br>Hair fall present<br>Miasm: Tubercular | MIND- Ailments from, grief<br>MIND – Fear, disease, of impending<br>MIND – Weeping, easily<br>GENERALS – Food and drinks, cold drinks, cold water,<br>GENERALS- Food and drinks, salt, aversion<br>THROAT- Swallowing, difficulty, solids<br>STOMACH- Pain, burning, epigastrium<br>EXTREMITIES – Pain, knee<br>HEAD- Hair, falling | TSH – 67.0MIU/ml<br>TgAb – 1212.0IU/ml<br>TPO – 40.76IU/ml<br>25(OH)D – 23.7ng/ml | 8 | Phosphorous 0/1 | TSH – 5.03MIU/ml<br>TgAb – 746.3IU/ml<br>TPO – 51.03IU/ml<br>25(OH)D – 24.8ng/ml | 5 | Moderate improvement<br><br>Vitamin D value has slightly raised |
| **6.** | Name:<br>Mrs..SV<br>Age:33 Yrs<br>Sex: Female<br>Occupation: | Grief about her alcoholic husband<br>Fear of being alone<br>Weeps easily<br>Anxiety about future | MIND – Grief<br>MIND- Fear, alone, of being<br>MIND – Weeping, easily<br>MIND- Anxiety, future | TSH – 23.58MIU/ml<br>TgAb – 1042.0IU/ml | 7 | Natrum Muriaticum 0/1 | TSH – 5.77MIU/ml<br>TgAb – 64IU/ml<br>TPO – | 3 | Marked improvement<br><br>Vitamin D value has slightly |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Coolie<br>Address: New office aaranivilai, kulasekharam | Fear of the disease<br>Desire for cold drinks<br>Cannot tolerate heat<br>Swelling of thyroid gland<br>Obesity<br>Weakness of the whole body<br>Miasm: Sycosis | about<br>MIND – Fear, disease of impending<br>GENERALS – Food and drinks, cold drink, cold water, desire<br>GENERALS – Warm, agg<br>EXTERNAL THROAT – Swelling, Thyroid gland<br>GENERALS – Obesity<br>GENERALS – Weakness | TPO – 364.71IU/ml<br>25(OH)D – 18.6ng/ml | | | 100.51IU/ml<br>25(OH)D – 20.1ng/ml | | increased |
| **7.** | Name: Mrs..VJ<br>Age:40 Yrs<br>Sex: Female<br>Occupation:Housewife<br>Address: Koaiyamangalathu veedu, Verkilambi | Religious<br>Consolation amelioration<br>Reduced appetite<br>Irregular menses<br>Intolerance to cold<br>Swelling of thyroid gland<br>Sensation of lump in throat<br>Cough with white expectoration at night<br>Weakness of body<br>Gaining of weight<br>Miasm: Psora | MIND- Religious affections, too occupied with religion<br>MIND – Consolation, amel<br>STOMACH- Appetite, diminished<br>FEMALE GENETALIA – Menses, irregular<br>GENERALS – Cold, becoming cold, after, agg<br>EXTERNAL THROAT – Swelling, thyroid gland<br>THROAT – Lump, sensation, of a<br>COUGH- Loose, night<br>EXPECTORATION – White<br>GENERALS – Weakness, excessive<br>GENERALS - Obesity | TSH – 29.91MIU/ml<br>TgAb – 14.89IU/ml<br>TPO – 97.04IU/ml<br>25(OH)D – 13.3ng/ml | 7 | Spongia 30 | TSH – 14.38MIU/ml<br>TgAb – 30.08IU/ml<br>TPO – 38.26IU/ml<br>25(OH)D – 14.5ng/ml | 4 | Moderate improvement<br><br>Vitamin D value has slightly increased. |
| **8.** | Name: Mrs..SA<br>Age:57 Yrs<br>Sex: Female | Inferior feeling<br>Grief that son has no child<br>Constant sadness | MIND – Confidence, want of self-confidence<br>MIND – Grief<br>MIND –Sadness- gloomy | TSH – 10.61MIU/ml<br>TgAb – | 9 | Natrum Muriaticum 0/1 | TSH – 6.03MIU/ml<br>TgAb – 474.3IU/ml | 4 | Moderate improvement<br><br>Vitamin D value |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Occupation: Housewife<br>Address: Punnakavilai Kaliyal | always present in her<br>Anger ends in weeping<br>constipated stool, difficulty in passing<br>Intolerance to heat<br>Swelling of the thyroid gland<br>Palpitation while walking<br>Weakness of the whole body<br>Dimness of vision<br>Miasm: sycosis | MIND- Weeping, anger, during<br>RECTUM – Constipation, difficult stool<br>GENERALS –Warm,agg<br>EXTERNAL THROAT – Swelling, thyroid gland<br>CHEST – Palpitation of heart, walking<br>GENERALS – Weakness<br>Vision – Dim | 386.3IU/ml<br>TPO – >600IU/ml<br>25(OH)D – 22.7ng/ml | | | TPO – 423.7IU/ml<br>25(OH)D – 24.1ng/ml | | has increased slightly |
| **9.** | Name: Mrs..MR<br>Age:32 Yrs<br>Sex: Female<br>Occupation:Housewife<br>Address: Charcode, thukkaley | Long standing grief about death of mother<br>Intolerance to cold<br>Incontinence of urine<br>Swelling of thyroid gland<br>Puffiness of face<br>Pain in epigastric region<br>Frothy vomiting<br>Difficulty in breathing<br>Heaviness of chest during respiration<br>Pain in cervical region<br>Weight gain<br>Weakness of the whole body<br>Miasm: sycosis | MIND – Grief, prolonged<br>GENERALS – Cold, becoming cold, after, agg<br>BLADDER –Urination, involuntary<br>EXTERNAL THROAT – Swelling, thyroid gland<br>FACE- Swelling<br>Stomach – Pain, epigastrium<br>STOMACH – Vomiting, type of, frothy<br>RESPIRATION – Asthmatic, thyroid, complaints of<br>CHEST- Oppression, respiration<br>BACK- Pain, cervical region<br>GENERALS – Obesity<br>GENERALS - Weakness | TSH – >100MIU/ml<br>TgAb – 586.3IU/ml<br>TPO – 127IU/ml<br>25(OH)D – 19.6ng/ml | 10 | Natrum muriaticum 0/3 | TSH – 43.5MIU/ml<br>TgAb – 427.20/ml<br>TPO – 35.25IU/ml<br>25(OH)D – 21.8ng/ml | 6 | Mild improvement<br><br>Vitamin D value has slightly increassed |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **10.** | Name:<br>Mrs..CR<br>Age:35 Yrs<br>Sex: Female<br>Occupation:<br>Coolie<br>Address:<br>Aayarcde | Easily gets anxious over small issues<br>She prefers to be alone<br>Does not like to opposed<br>Does not like to be consoled<br>Desire for salt<br>No perspiration at all<br>Swelling of the thyroid gland<br>Severe pain in the throat while swallowing food<br>Hair fall is present<br>Extreme tiredness is present<br>Miasm: Psora | MIND- Anxiety, trifles, about<br>MIND – Company , aversion to – desire for solitude<br>MIND – Contradiction, intolerant of contradiction<br>MIND – Consolation, agg<br>GENERALS – Food and drinks, salt, desire<br>SKIN- Dry, perspire, inability to<br>EXTERNAL THROAT – Swelling, thyroid gland<br>THROAT – Pain, swallowing food<br>HEAD – Hair, falling<br>GENERALS – Weariness, chronic | TSH – 33.93MIU/ml<br>TgAb – 57.00IU/ml<br>TPO – >600IU/ml<br>25(OH)D – 17.3ng/ml | 6 | Lycopodium 0/1 | TSH – 16.33MIU/ml<br>TgAb – 54.89IU/ml<br>TPO – 600.07IU/ml<br>25(OH)D – 16.5ng/ml | 3 | Marked improvement<br><br>Vitamin D value has slightly reduced |
| **11.** | Name:<br>Mrs..RJ<br>Age:34 Yrs<br>Sex: Female<br>Occupation:<br>housewife<br>Address:<br>Parrakai road, Nagercoil | Grief of Father's death<br>Wants to have someone with her always<br>Fear of being alone<br>Weeps easily<br>Desire for sweets<br>Swelling of the thyroid gland<br>Hoarseness of voice<br>Numbness of the hands<br>Distension of abdomen after eating<br>Pain in the heel<br>Miasm: Sycosis | MIND – Grief<br>MIND- Company- desire for<br>MIND- Fear, alone, of being<br>MIND –Weeping easily<br>EXTERNAL THROAT – Swelling , thyroid gland<br>LARYNX AND TRACHEA- Voice, hoarseness<br>EXTREMITIES- Numbness, Hand<br>ABDOMEN –Distension, eating, after<br>EXTREMITIES, Pain, heel | TSH – 24.92MIU/ml<br>TgAb – >1500IU/ml<br>TPO – 402.70IU/ml<br>25(OH)D – 12.6ng/ml | 9 | Pulsatilla 200 | TSH – 16.32MIU/ml<br>TgAb – 1028.2IU/ml<br>TPO – 404IU/ml<br>25(OH)D – 14.5ng/ml | 7 | Mild improvement<br><br>Vitamin D value has increased |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **12.** | Name:<br>Mrs..MD<br>Age:38 Yrs<br>Sex: Female<br>Occupation:<br>Housewife<br>Address:<br>Kottaikaham,<br>Mekkamandap<br>am | Cannot remember things, when thinking too much<br>Desire to be alone<br>Aversion for coition<br>Pain in head before menses<br>Cannot tolerate cold environment<br>Intolerance to milk products<br>Pain in the lumbar region while standing<br>Frequent occurrence of cramps<br>Hard swelling in the throat<br>Pain while swallowing the food<br>Pain is better by drinking<br>Miasm: sycosis | MIND- Forgetful, mental exertion, from<br>MIND – Company, aversion to, desire for solitude<br>FEMALE GENETALIA – Coition, aversion to<br>HEAD-Pain, menses, before<br>GENERALS- Cold, becoming cold, after, agg<br>GENERALS – Food and drinks, milk, agg<br>BACK- Pain, lumbar region, standing<br>GENERALS –Pain, cramping, muscles<br>GENERALS- Swelling, glands, of, hard<br>THROAT – Pain, swallowing, food<br>THROAT – Pain, drinking, amel | TSH – 15.10MIU/ml<br>TgAb – >100IU/ml<br>TPO – 33.08IU/ml<br>25(OH)D – 19.23ng/ml | 9 | Calcarea iodatum 30 | TSH – 6.04MIU/ml<br>TgAb – 56.87IU/ml<br>TPO – 34.5IU/ml<br>25(OH)D – 19.0ng/ml | 6 | Moderate improvement<br><br>Vitamin D level is almost the same. Slightly reduced |
| **13.** | Name:<br>Mrs..SD<br>Age:35 Yrs<br>Sex: Female<br>Occupation:<br>Coolie<br>Address:<br>Ramanparamb<br>u, Thuckley | Constant desire to travel<br>Yielding disposition<br>Weeps easily<br>Appetite is reduced<br>Thirst reduced<br>Sleep is disturbed<br>Frequent palpitations with anxiousness<br>Vertigo, especially in | MIND- Travelling, desire for<br>MIND- Yielding disposition<br>MIND – Weeping, easily<br>STOMACH – Appetite, diminished<br>STOMACH – Thirstless<br>SLEEP – Disturbed<br>CHEST – Palpitation of | TSH – >100MIU/ml<br>TgAb – 510.7IU/ml<br>TPO – 190.3IU/ml<br>25(OH)D – 12.75ng/ml | 5 | Pulsatilla 200 | TSH – 4.64MIU/ml<br>TgAb – 276.4IU/ml<br>TPO – 54.6IU/ml<br>25(OH)D – 13.8ng/ml | 3 | Marked improvement<br><br>Vitamin D value has increased |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | the night<br>Sensation of lump in the throat<br>Weakness of the lower limbs<br>Miasm: Psora | heart, anxiety, with<br>VERTIGO – Night<br>THROAT – Lump, sensation of a<br>EXTREMITIES- Weakness, lower limbs | | | | | | |
| **14.** | Name: Mrs..TI<br>Age:60 Yrs<br>Occupation: Housewife<br>Sex: Female<br>Address: Palakattuvilai, Aramannam | Gets irritated easily<br>Desires consolation<br>Reduced appetite<br>Perspires profusely at night<br>Passes stool after food<br>Difficulty in breathing<br>Aggravating in cold exposure<br>Swelling in the throat<br>Difficulty in swallowing food<br>Pain in the knee joint, while rising from the seat<br>Miasm: Psora | MIND- Irritability – easily<br>MIND- Consolation – amel<br>STOMACH- Appetite , diminished<br>PERSPIRATION- Profuse, night<br>STOOL – eating, after<br>RESPIRATION – Difficult –cold, talking, after<br>EXTERNAL THROAT – Swelling, thyroid gland<br>THROAT – Swallowing, difficult, solids<br>EXTREMITIES –Pain, knee, rising, seat, from a | TSH – 34.6MIU/ml<br>TgAb – 1124.7IU/ml<br>TPO – 227.3IU/ml<br>25(OH)D – 25.4ng/ml | 8 | Natrum mur 0/1 | TSH – 0.05MIU/ml<br>TgAb – 871.00IU/ml<br>TPO – 120.70IU/ml<br>25(OH)D – 26.8ng/ml | 5 | Moderate improvement<br><br>Vitamin D value has slightly increased |
| **15.** | Name: Mrs..LA<br>Age:41 Yrs<br>Sex: Female<br>Occupation: housewife<br>Address: Devakivilasam , kulapuram | Sympathetic towards others<br>Dwells over the memories<br>Desire for cold foods<br>Profuse sweating in the head<br>Disturbed sleep<br>Swelling in the throat<br>Palpitations at morning | MIND- Sympathetic<br>MIND –Dwells past disagreeable occurrences, on<br>GENERALS – Food and drinks – cold food, desire<br>HEAD- Perspiration of scalp only the head<br>SLEEP – Disturbed<br>EXTERNAL THROAT – Swelling, thyroid gland | TSH – 7.61MIU/ml<br>TgAb – 306.4IU/ml<br>TPO – 351.4IU/ml<br>25(OH)D – 17.4ng/ml | 8 | Causticum 200 | TSH – 1.94MIU/ml<br>TgAb – 184.8IU/ml<br>TPO – 190.3IU/ml<br>25(OH)D – 16ng/ml | 4 | Moderate improvement<br><br>Vitamin D value has reduced |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Hot flushes on and off<br>Vertigo while in bed<br>Distension of abdomen<br>Loud eructation<br><br>Miasm: Psora | CHEST –Palpitations of heart, morning<br>GENERALS – Heat, flushes of<br>VERTIGO – Bed, in, agg<br>ABDOMEN – Distension, hypogastrium<br>STOMACH – Eructation, type of, loud | | | | | | |
| **16.** | Name:<br>Mrs..JI<br>Age:34 Yrs<br>Sex: Female<br>Occupation: Houswife<br>Address: Manalikalavilai, Ponmanai | Grief about losing money<br>Fear of being alone<br>Consolation aggravation<br>Desire for open air<br>Desire for cold drinks<br>Constipated difficult stool<br>Sensation of lump in the throat<br>Cough with white expectoration<br>Weak feeling all over the body<br>Miasm: sycosis | MIND-Ailments from, money, from losing<br>MIND- Fear, alone, of being<br>MIND-Consolation, agg<br>GENERALS –Air, open air, desire for<br>GENERALS- Food and drinks- cold drinks, cold water, desire<br>RECTUM – Constipation, difficult stool<br>THROAT – Lump, sensation of a<br>EXPECTORATION – white<br>GENERALS –Weakness, excessive | TSH – 52.70MIU/ml<br>TgAb – 597.9IU/ml<br>TPO – 141.3IU/ml<br>25(OH)D – 22.7ng/ml | 10 | Natrum muriaticum 0/1 | TSH – 32.85MIU/ml<br>TgAb – 720.04IU/ml<br>TPO – 63.4IU/ml<br>25(OH)D – 24ng/ml | 7 | Mild improvement<br><br>Vitamin D value has increased |
| **17.** | Name:<br>Miss..MK<br>Age:13Yrs<br>Sex: Female<br>Occupation:Student<br>Address: Enayam, | Fear of darkness<br>Becomes violent when angry<br>Weeps during anger<br>Dreams of dead people<br>Reduced appetite<br>Perspiration increased in palms and soles | MIND- Fear, dark, of<br>MIND – Anger, violent<br>MIND- weeping, anger, during<br>DREAMS-Dead bodies<br>STOMACH – Appetite, diminished<br>EXTREMITIES – | TSH – 18.78MIU/ml<br>TgAb – 938IU/ml<br>TPO – 1132IU/ml<br>25(OH)D – | 5 | Calcarea iodatum 30 | TSH – 5.02MIU/ml<br>TgAb – 396IU/ml<br>TPO – 540IU/ml<br>25(OH)D – 28.9ng/ml | 2 | Marked improvement<br><br>Vitamin D value has increased slightly |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pathenthurai | Swelling in the throat<br>Hoarseness of voice<br>Falling of hair present | Perspiration, hand, palms<br>EXTREMITIES – Perspiration, foot, sole<br>EXTERNAL THYROID – Swelling, thyroid gland<br>LARYNX AND TRACHEA – Voice – hoarseness<br>HEAD – Hair, falling | 27.6ng/ml | | | | | |
| **18.** | Name: Mrs..GP<br>Age:50Yrs<br>Sex: Female<br>Occupation: Housewife<br>Address: Paramuttivilai, Thiruvarambu | Anxiety about financial issues<br>Helpless feeling<br>Cannot tolerate cold<br>Swelling of thyroid gland<br>Pain in the shoulder joints at night<br>Pain in lumbar region while standing<br>Pain in the knee joints<br>Obesity<br>Miasm: Psora | MIND-Anxiety, money matters, about<br>MIND – Helplessness, feeling of<br>GENERALS – Cold, becoming cold, after, agg<br>EXTERNAL THROAT – Swelling, thyroid gland<br>EXTREMITIES –Pain, shoulder, right<br>BACK – Pain, lumbar region, standing<br>EXTREMITIES –Pain, knee<br>GENERALS -Obesity | TSH – 7.78MIU/ml<br>TgAb – 700.9IU/ml<br>TPO – 126.8IU/ml<br>25(OH)D – 16.54ng/ml | 9 | Calcarea carb 0/1 | TSH – 4..85MIU/ml<br>TgAb – 224.65IU/ml<br>TPO – 130.62IU/ml<br>25(OH)D – 17.3ng/ml | 5 | Moderate improvement<br><br>Vitamin D value has slightly increased |
| **19.** | Name: Mrs..FT<br>Age:34Yrs<br>Sex: Female<br>Occupation: Coolie<br>Address: Perai, plankavilai | Grief about constant problem in the family<br>Feels that she has no one to care for her<br>Consolation amelioration<br>Irregular menses<br>Offensive leucorrhoea<br>Heat intolerance<br>Profuse sweating<br>Swelling of the thyroid | MIND – Grief, prolonged<br>MIND- Forsaken feeling, beloved by his parents, wife, friends, feeling of not being<br>MIND- Consolation, amel<br>FEMALE GENETALAI – Menses, irregular<br>FEMALE GENETALIA – Leukorrhea, offensive<br>GENERALS –Warm, agg | TSH – 6.82.MIU/ml<br>TgAb – 357.7IU/ml<br>TPO – 15.52IU/ml<br>25(OH)D – 21.3ng/ml | 10 | Natrum muriaticum 200 | TSH – 4.16.MIU/ml<br>TgAb – 223.6IU/ml<br>TPO – 31.5IU/ml<br>25(OH)D – 21.0ng/ml | 7 | Mild improvement<br><br>Vitamin D value is almost the same. Very slightly increased |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | gland<br>Falling of hair<br>Vertigo especially in the morning, while waking<br>Numbness of the feet on and off<br>Mism: Sycosis | PERSPIRATION- Profuse<br>EXTERNAL THROAT- Swelling, thyroid gland<br>HEAD – Hair, falling<br>VERTIGO –Morning, waking on<br>EXTREMITIES – Numbness, foot | | | | | | |
| **20.** | Name: Mrs..Mrs.SA<br>Age:26Yrs<br>Sex: Female<br>Occupation:Student<br>Address: Mulagumodu. Madatharavilai | Ailments after disappointed love<br>Gets angered easily<br>Desire for cold drinks<br>Desire sweets<br>Intolerance to cold air<br>Swelling of thyroid gland<br>Sneezing frequent<br>Discharge is thick<br>Pain in the head while sneezing<br>Miasm: Psora | MIND – Aliments from, love, disappointed<br>MIND- Anger, easily<br>GENERALS – Food and drinks , cold drinks, cold water, desire<br>GENERALS – Food and drinks, sweets, desire<br>GENERALS – Cold, air, agg<br>EXTERNAL THROAT – Swelling, thyroid gland<br>NOSE- Sneezing, frequent<br>NOSE- Discharge, thick<br>HEAD – Pain, sneezing | TSH – 14.90.MIU/ml<br>TgAb – 320.4IU/ml<br>TPO – 103.4IU/ml<br>25(OH)D – 17.9ng/ml | 9 | Phosphorous 0/1 | TSH – 7.32.MIU/ml<br>TgAb – 416.3IU/ml<br>TPO – 52.0IU/ml<br>25(OH)D – 19.3ng/ml | 6 | Moderate improvement<br><br>Vitamin D value has increased |
| **21.** | Name: Miss.NS<br>Age:19Yrs<br>Sex: Female<br>Occupation:Student<br>Address: Kottavilai, Thikkanamcode | Introvert<br>Fear of darkness<br>Cannot concentrate properly<br>Irregular menses<br>Prolonged menses<br>Catch cold easily<br>Desire for sweets<br>Swelling of the thyroid gland<br>Weakness of the body at night | MIND – RESERVED<br>MIND- Fear, dark of<br>MIND- Concentration, difficult<br>FEMALE GENETALIA – MENSES –irregular<br>FEMALE GENITALIA – Menses – protracted<br>GENERALS –Cold, take cold, tendency to<br>GENERALS – Food and drinks , sweets, desire | TSH – 89.7MIU/ml<br>TgAb – 253.2IU/ml<br>TPO – 341.7IU/ml<br>25(OH)D – 31.5ng/ml | 6 | Calcarea carb 0/1 | TSH – 45.6MIU/ml<br>TgAb – 176.3IU/ml<br>TPO – 231.3IU/ml<br>25(OH)D – 33.7ng/ml | 3 | Marked improvement<br><br>Vitamin D value was already normal. Value has increased |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Obesity<br>Mism; psora | EXTERNAL THROAT – Swelling, thyroid gland<br>GENERALS-Weakness, night<br>GENERALS – Obesity | | | | | | |
| **22.** | Name: Miss.NA<br>Age:29Yrs<br>Sex: Female<br>Occupation:Teacher<br>Address: Attar, veeyanoor | Anger is violent<br>Consolation aggravation<br>Obstinate<br>Menses is scanty<br>Pain in lumbar region during menses<br>Profuse leucorrhoea before menses<br>Swelling of the thyroid gland<br>Hoarseness of voice<br>Aching pain in both knee joint<br>Gaining of weight<br>Miasm: sycosis | MIND- Anger , violent<br>MIND-Consolation, agg<br>MIND – Obstinate<br>FEMALE GENITALIA – Menses, scanty<br>BACK –Pain, lumbar region, menses, during<br>FEMALE GENETALIA – Leukorrhea, copious, menses, before<br>EXTERNAL THROAT – Swelling, thyroid gland<br>LARYNX AND TRACHEA – Voice, hoarseness<br>EXTREMITIES –Pain, aching, knee<br>GENERALS- Obesity | TSH – 9.40MIU/ml<br>TgAb – 108.54IU/ml<br>TPO – 52.0IU/ml<br>25(OH)D – 19.3ng/ml | 8 | Calcarea carb 0/1 | TSH – 6.03MIU/ml<br>TgAb – 67.32IU/ml<br>TPO – 101.2IU/ml<br>25(OH)D – 22.0ng/ml | 4 | Moderate improvement<br><br>Vitamin D value has increased |
| **23.** | Name: Miss.SR<br>Age:48Yrs<br>Sex: Female<br>Housewife<br>Address: Puthur, Mandaikadu | Fastidious<br>Too responsible<br>Fear of failure<br>Anxiety about health<br>Desire for spicy food<br>Constipated hard stool<br>Swelling of the thyroid gland<br>Sensation of lump in the throat<br>Distension of the | MIND – Fastidious<br>MIND – Responsibility, taking responsibility too, seriously<br>MIND –Fear, failure of<br>MIND –Anxiety , about, own health, one's<br>GENERALS – Food and drinks, spices, desire<br>STOOL – Hard<br>EXTERNAL THROAT – | TSH – 13.80MIU/ml<br>TgAb – 181.10IU/ml<br>TPO – >600U/ml<br>25(OH)D – 20.7ng/ml | 10 | Lycopodium 0/1 | TSH – 5.10MIU/ml<br>TgAb 201.5IU/ml<br>TPO – 328.6U/ml<br>25(OH)D – 19.6ng/ml | 6 | Moderate improvement<br><br>Vitamin D value has slightly reduced |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | abdomen in evening<br>Eructation are sour<br>Mism: Sycosis | Swelling, thyroid gland<br>THROAT – Lump, sensation of a<br>ABDOMEN – Distension, evening<br>STOMACH –Eructations, type of, sour | | | | | | |
| **24.** | Name: Miss.BY<br>Age:42Yrs<br>Sex: Female<br>Occupation:Hoiusewife<br>Address: Ayyapan vilai, Mankedu | Grief of death of husband<br>Revengeful<br>Heat flushes suddenly<br>Intolerance to heat<br>Cold sweating over the face<br>Swelling of the thyroid gland painful<br>Constriction feeling in the throat<br>Difficulty in breathing<br>Palpitation at night<br>Miasm: psora | MIND- Grief, prolonged<br>MIND- Malicious<br>GENERALS- Heat, flushes of<br>GENERALS – Warm, agg<br>FACE- Perspiration, cold<br>EXTERNAL THROAT – Pain, thyroid gland<br>THROAT- Constriction<br>RESPIRATION – Difficult<br>CHEST – Palpitation of heart, night | TSH – 37.9MIU/ml<br>TgAb – 358.9IU/ml<br>TPO 72.2U/ml<br>25(OH)D – 16.3ng/ml | 7 | Lachesis 0/1 | TSH – 11.4MIU/ml<br>TgAb – 116.7IU/ml<br>TPO 51.2U/ml<br>25(OH)D – 17.9ng/ml | 3 | Marked improvement<br><br>Vitamin D value has increased |
| **25.** | Name: Miss.SNA<br>Age:29Yrs<br>Sex: Female<br>Occupation: Accountant<br>Address: Manakallu, Balasamapuram | Wants to be cared<br>Introvert<br>Leucorrhoea is watery<br>Reduced appetite<br>Pain in throat while swallowing food<br>Heaviness sensation in throat<br>Burning sensation in throat<br>Nausea feeling<br>Palpitation on and off<br>Miasm: Psora | MIND- Caressed, being, want to be caressed<br>MIND –Reserved<br>FEMALE GENETALIA – Leukorrhea, thin<br>STOMACH –Appetite, diminished<br>THROAT –Pain, swallowing, food<br>THROAT –Heaviness<br>THROAT – Pain, burning<br>STOMACH – Nausea, throat, in<br>CHEST – Palpitation of | TSH – 12.67MIU/ml<br>TgAb – 38.6IU/ml<br>TPO 696.3U/ml<br>25(OH)D – 18.2ng/ml | 7 | Lycopodium 30 | TSH – 8.22MIU/ml<br>TgAb – 41.5IU/ml<br>TPO 237.7U/ml<br>25(OH)D – 19.6ng/ml | 4 | Moderate improvement<br><br>Vitamin D value has slightly increased |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | heart, appearing, suddenly | | | | | | |
| **26.** | Name:<br>Miss.PA<br>Age:40Yrs<br>Sex: Female<br>Occupation:Coolie<br>Address:<br>Arumanai. | Regret that she has committed mistake<br>Brooding over the past<br>Intolerance to cold<br>Reduced thirst<br>Dream of death<br>Swelling of the thyroid gland<br>Pain in the elbow joint<br>Pain in the ankle joint<br>Obesity<br>Weakness of the body<br>Miasm: psora | MIND – Remorse<br>MIND- Brooding<br>GENERALS – Cold, becoming cold, after, agg<br>STOMACH – Thirstless<br>DREAM – Death<br>EXTERNAL THROAT – Swelling, thyroid gland<br>EXTREMITIES – Pain, elbow<br>EXTREMITIES –Pain, ankle<br>GENERALS - Obesity | TSH – 25.6MIU/ml<br>TgAb – 63.7IU/ml<br>TPO 709.4U/ml<br>25(OH)D – 17.34ng/ml | 9 | Calcarea carb 30 | TSH – 3.23MIU/ml<br>TgAb – 31.4IU/ml<br>TPO 112.7U/ml<br>25(OH)D – 17.5ng/ml | 4 | Moderate improvement<br><br>Vitamin D value is almost the same |
| **27.** | Name:<br>Mrs.SK<br>Age:28Yrs<br>Sex: Female<br>Occupation: Teacher<br>Address:<br>Velivaram, Thalakulam | Grief of change of place<br>Love to help others<br>Does not like to talk much<br>Contradiction aversion<br>Sleepiness all day<br>Difficulty in passing stool<br>Sensation of lump in throat<br>Constricted feeling in the throat<br>Constant continuous Yellow expectoration<br>Pain in the head during cough<br>Miasm: sycosis | MIND – Grief, silent<br>MIND- Sympathetic<br>MIND –Taciturm<br>MIND- Contradiction, intolerant of contradiction<br>SLEEP – Sleepiness, constant<br>RECTUM – Constipation, difficult stool<br>THROAT – Lump, sensation of a<br>COUGH –Constant<br>EXPECTORATION – Yellow<br>HEAD – Pain, coughing, on | TSH – >150MIU/ml<br>TgAb – 48.03U/ml<br>TPO 72.15U/ml<br>25(OH)D – 20.1ng/ml | 8 | Ignatia 1M | TSH – 52.18MIU/ml<br>TgAb – 37.9U/ml<br>TPO 101.1U/ml<br>25(OH)D – 21.4ng/ml | 5 | Moderate improvement<br><br>Vitamin D value has increased |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **28.** | Name:<br>Mrs.AA<br>Age:32Yrs<br>Sex: Female<br>Occupation:<br>Housewife<br>Address:<br>Mylattuvilai,<br>Ponmanai | Hatred towards her family<br>Insulted feeling<br>Intolerance to heat<br>Reduced appetite<br>Irregular menses<br>Lower abdominal pain during menses<br>Dark clots in menses<br>Headache before menses<br>Constriction sensation of the throat<br>Mism: psora | MIND – Hatred<br>MIND – Indignation<br>GENERALS – Warm, agg<br>STOMACH – Appetite, diminished<br>FEMALE GENETALIA-Menses, irregualar<br>ABDOMEN – Pain, Hypogastrium, menses, during<br>FEMALE GENETALIA – Menses, clotted, dark clots<br>HEAD –Pain, menses, before<br>THROAT - Constriction | TSH – 6,96MIU/ml<br>TgAb – 101.4U/ml<br>TPO 33.35U/ml<br>25(OH)D – 15.7ng/ml | 5 | Lachesis 0/1 | TSH – 4.32MIU/ml<br>TgAb – 43.2U/ml<br>TPO - 32.5U/ml<br>25(OH)D – 16.9ng/ml | 2 | Marked improvement<br><br>Vitamin D value has increased |
| **29.** | Name:<br>Mrs.PK<br>Age:42Yrs<br>Sex: Female<br>Occupation:<br>Coolie<br>Address: NSK villai,<br>Shenbagaramathur | Anxiety about future<br>Adjustable with others<br>Cheerful person<br>Cold perspiration in the face<br>Easily catches cold<br>Pain in the temples on and forehead on and off<br>Pain after exposure in sun<br>Pain in the throat while swallowing food<br>Stitching pain in both knee joint<br>Weakness of lower limbs<br>Miasm: sycosis | MIND- Anxiety, future about<br>MIND – Yielding disposition<br>MIND – Cheerful<br>FACE – Perspiration, cold<br>GENERALS – Cold, tale cold, tendency to<br>HEAD – Pain, Temples and forehead<br>Head – Pain, sun, from exposure to<br>THROAT – Pain, swallowing, food<br>EXTREMITIES – Pain, stitching, knee<br>EXTREMITIES – Weakness, lower limbs | TSH – 40.0MIU/ml<br>TgAb – 638.5U/ml<br>TPO 368.5U/ml<br>25(OH)D – 23.4ng/ml | 9 | Phosphorous 200 | TSH – 17.6MIU/ml<br>TgAb – 239.7/ml<br>TPO - 76.9U/ml<br>25(OH)D – 24.5ng/ml | 6 | Moderate improvement<br><br>Vitamin D value has increased slightly |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **30.** | Name:<br>Mrs.JK<br>Age:36Yrs<br>Sex: Female<br>Occupation:<br>Housewife<br>Address:<br>Arulaladapuram,<br>Thikkanamcode | Introvert<br>Obstinate<br>Wants to ne alone<br>Appetite reduced<br>Sleepiness all day<br>Prolonged menses<br>Obstructed sensation in the throat<br>Difficulty in breathing while lying down<br>Pain in the cervical region when turning head<br>Palpitations at night<br>Obesity<br>Miasm Psora | MIND – Reserved<br>MIND – obstinate<br>MIND – Company, aversion to, desire for solitude<br>STOMACH – Appetite, diminished<br>SLEEP – Sleepiness, constant<br>FEMALE GENETALIA – Menses, protracted<br>THROAT – Obstruction<br>RESPIRATION – Difficult, lying, while<br>BACK- Pain, cervical – turning head<br>CHEST- Palpitation of heart, night<br>GENERALS - Obesity | TSH – 10.8MIU/ml<br>TgAb – 361.1U/ml<br>TPO- 49.04U/ml<br>25(OH)D – 19.3ng/ml | 7 | Calcarea carb 0/3 | TSH – 4.74MIU/ml<br>TgAb – 131.2U/ml<br>TPO- 43.1U/ml<br>25(OH)D – 19.5ng/ml | 3 | Marked improvement<br><br>Vitamin D value is almost the same, very slightly increased |

# APPENDIX – IX

## FOLLOW UP CHART

| Case No | First Prescription | I VISIT | | II VISIT | | III VISIT | | IV VISIT | | V VISIT | | VI VISIT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SCORE | PRESCRIPTION | SCORE | PRESCRIPTION | SCORE | PRESCRIPTION | SCORE | PRESCRIPTION | SCORE | PRESCRIPTION | SCORE | PRESCRIPTION |
| **1.** | Phosphorus 0/1 | **7** | Phosphorus 0/1 | **6** | Phosphorus 0/2 | **6** | Phosphorus 0/2 | **6** | Phosphorus 0/3 | **5** | Phosphorus 0/3 | **4** | Phosphorus 0/4 |
| **2.** | Sepia 0/1 | **8** | Sepia 0/1 | **8** | Natrum Mur 200 | **8** | Natrum Mur 200 | **7** | SL / 2D | **7** | Natrum Mur 1M | **5** | SL / 2D |
| **3.** | Natrum Mur 1M | **9** | SL/2D | **8** | SL/2D | **8** | Natrum Mur 1M | **6** | SL/2D | **6** | SL/2D | **5** | Calcarea Carb 1M |
| **4.** | Calc Iod 200 | **6** | Calc Iod 200 | **6** | Calc Iod 200 | **5** | Calc Iod 200 | **4** | Calc Iod 200 | **4** | Calc Iod 200 | **3** | Calc Iod 200 |
| **5.** | Phosphorus 0/1 | **7** | Phosphorus 0/1 | **7** | Phosphorus 0/1 | **7** | Phosphorus 0/2 | **6** | Phosphorus 0/2 | **6** | Phosphorus 0/3 | **5** | Phosphorus 0/3 |
| **6.** | Natrum Mur 0/1 | **7** | Natrum Mur 0/3 | **7** | Natrum Mur 0/3 | **6** | Natrum Mur 0/3 | **6** | Thuja 200 | **4** | Natrum Mur 0/5 | **3** | Natrum Mur 0/5 |
| **7.** | Spongia 30 | **7** | Calcarea carb 200 | **6** | Calcarea carb 200 | **5** | Calcarea carb 200 | **4** | Calcarea carb 200 | **4** | Calcarea carb 200 | **4** | Calcarea carb 200 |
| **8.** | Natrum Mur 0/1 | **9** | Natrum Mur 0/1 | **9** | Thuja 200 | **7** | Natrum Mur 0/2 | **6** | Natrum Mur 0/2 | **5** | Natrum Mur 0/3 | **4** | Natrum Mur 0/3 |
| **9.** | Natrum Mur 0/3 | **10** | Natrum Mur 0/3 | **10** | Thuja 200 | **8** | Natrum Mur 0/5 | **8** | Natrum Mur 0/5 | **7** | SL 2D | **6** | Natrum Mur 0/5 |
| **10.** | Lycopodium 0/1 | **6** | Iodum 1M | **5** | Lycopodium 0/2 | **5** | Lycopodium 0/2 | **4** | Lycopodium 0/3 | **3** | Lycopodium 0/3 | **3** | Lycopodium 0/4 |
| **11.** | Pulsatilla 200 | **9** | Pulsatilla 200 | **9** | Pulsatilla 200 | **8** | Thuja 200 | **8** | Pulsatilla 200 | **8** | Pulsatilla 200 | **7** | Pulsatilla 1M |
| **12.** | Calcarea iodata 30 | **9** | Calcarea iodata 30 | **8** | Calcarea iodata 30 | **8** | Calcarea iodata 200 | **7** | Calcarea iodata 200 | **6** | Sepia 200 | **6** | SL/2D |
| **13.** | Pulsatilla 200 | **5** | Pulsatilla 200 | **5** | Pulsatilla 200 | **4** | Pulsatilla 200 | **3** | SL/2D | **3** | Pulsatilla 200 | **3** | SL/2D |
| **14.** | Natrum mur 0/1 | **8** | Natrum mur 0/1 | **8** | Natrum mur 0/1 | **7** | Natrum mur 0/2 | **6** | Natrum mur 0/2 | **5** | Natrum mur 0/3 | **5** | Natrum mur 0/3 |
| **15.** | Causticum | **8** | Causticum | **8** | Causticum | **7** | Causticum | **6** | Causticum | **4** | Causticum | **4** | Causticum |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 200 | | 200 | | 200 | | 200 | | 200 | | 200 | | 200 |
| **16.** | Natrum Muriaticum 0/1 | **10** | Natrum Muriaticum 0/1 | **10** | Natrum Muriaticum 0/2 | **9** | Natrum Muriaticum 0/3 | **8** | Natrum Muriaticum 0/3 | **8** | Natrum Muriaticum 0/4 | **7** | Natrum Muriaticum 0/4 |
| **17.** | Calcarea iodatum 30 | **5** | Calcarea iodatum 30 | **5** | Calcarea iodatum 30 | **4** | Calcarea iodatum 30 | **4** | Psorinum 1M | **2** | Calcarea iodatum 200 | **2** | Calcarea iodatum 200 |
| **18.** | Calcarea carb 0/1 | **9** | Calcarea carb 0/1 | **9** | Calcarea carb 0/2 | **9** | Calcarea carb 0/2 | **8** | Sulphur 200 | **5** | Calcarea carb 0/3 | **5** | Calcarea carb 0/3 |
| **19.** | Natrum muriaticum 200 | **10** | Natrum muriaticum 200 | **10** | Natrum muriaticum 200 | **10** | Natrum muriaticum 200 | **9** | Natrum muriaticum 200 | **8** | Natrum muriaticum 200 | **7** | Natrum muriaticum 200 |
| **20.** | Phosphorous 0/1 | **9** | Phosphorous 0/1 | **9** | Phosphorous 0/1 | **9** | Sulphur 200 | **6** | Phosphorous 0/2 | **6** | Phosphorous 0/2 | **6** | Phosphorous 0/2 |
| **21.** | Calcarea carb 0/1 | **6** | Calcarea carb 0/1 | **5** | Calcarea carb 0/1 | **5** | Calcarea carb 0/2 | **4** | Calcarea carb 0/2 | **4** | Calcarea carb 0/3 | **3** | Calcarea carb 0/3 |
| **22.** | Calcarea carb 0/1 | **8** | Calcarea carb 0/1 | **7** | Calcarea carb 0/3 | **7** | Calcarea carb 0/3 | **5** | Calcarea carb 0/6 | **4** | Calcarea carb 0/6 | **4** | Calcarea carb 0/6 |
| **23.** | Lycopodium 0/1 | **10** | Lycopodium 0/1 | **8** | Lycopodium 0/1 | **7** | Lycopodium 0/2 | **6** | Lycopodium 0/2 | **6** | Lycopodium 0/2 | **6** | Lycopodium 0/3 |
| **24.** | Lachesis 0/1 | **7** | Lachesis 0/1 | **5** | Lachesis 0/1 | **5** | Lachesis 0/2 | **5** | Lachesis 0/2 | **4** | Lachesis 0/2 | **3** | Lachesis 0/2 |
| **25.** | Lycopodium 30 | **7** | Lycopodium 30 | **7** | Lycopodium 30 | **6** | Lycopodium 30 | **5** | Sulphur 200 | **4** | Lycopodium 200 | **4** | Lycopodium 200 |
| **26.** | Calcarea carb 30 | **9** | Calcarea carb 30 | **9** | Calcarea carb 30 | **8** | Calcarea carb 30 | **7** | Sulphur 30 | **5** | Calcarea carb 30 | **4** | Calcarea carb 200 |
| **27.** | Ignatia 1M | **8** | SL/2D | **7** | SL/2D | **7** | SL/2D | **6** | Ignatia 1M | **6** | SL/2D | **5** | SL/2D |
| **28.** | Lachesis 0/1 | **5** | Lachesis 0/1 | **4** | Lachesis 0/1 | **4** | Lachesis 0/2 | **3** | Lachesis 0/2 | **2** | Lachesis 0/2 | **2** | Lachesis 0/3 |
| **29.** | Phosphorous 200 | **9** | Phosphorous 200 | **9** | Phosphorous 200 | **8** | Phosphorous 200 | **6** | SL/2D | **6** | Phosphorous 200 | **6** | Phosphorous 200 |
| **30.** | Calcarea carb 0/3 | **7** | Calcarea carb 0/3 | **7** | Calcarea carb 0/3 | **6** | Calcarea carb 0/5 | **5** | Calcarea carb 0/5 | **5** | Calcarea carb 0/5 | **3** | Calcarea carb 0/5 |