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Retrospective Evaluation of Goitre Cases: Clinical Patterns and Homoeopathic Management

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ABSTRACT

Background: Goitre, the abnormal enlargement of the thyroid gland, is a prevalent endocrine disorder often linked to iodine deficiency and autoimmune etiologies. Conventional therapeutic intervention involves hormonal therapies followed by surgical interventions, but long-term dependence and adverse effects have prompted investigation into complementary approaches such as Homoeopathy.

Objective: To retrospectively analyse the role of individualised homoeopathic treatment in managing goitre, focusing on changes in thyroid function and symptom relief.

Methods: The clinical data of 15 patients diagnosed with goitre and treated between January 2016 and December 2022 at the OPD & IPD of Sarada Krishna Homoeopathic Medical College were retrospectively examined. Participants had elevated TSH levels with normal (TFT) results and clinical symptoms, using descriptive statistical analysis.

Results: Most patients were between 21 and 40 years of age (40%), and all were female. The most frequently used medicines included Natrum muriaticum (33%) and Calcarea iodatum (20%). TFT improvements were observed in 53% of the subjects, 27% maintained steady results, and 20% showed regression. Clinical improvement, as assessed by Zulewski's scoring, revealed marked progress in 13%, moderate progress in 47%, and mild progress in 33% of cases.

Conclusion: The findings indicate that individualised homoeopathic management can support hormonal stabilisation and clinical improvement in goitre. Larger prospective studies with controlled methodologies are recommended for validation.

Keywords: Benign, Cervical, Constitutional prescribing, Goitre, Retrospective analysis, Thyroid disorders

INTRODUCTION

Goitre represents an abnormal enlargement of the thyroid gland, commonly presenting as swelling in the anterior neck. Probable causes are iodine deficiency, autoimmune thyroiditis, thyroid nodules, and sometimes thyroid cancer. [1] The most common global cause is iodine deficiency, a significant public health issue in regions with insufficient dietary intake. [2,3] In India, despite decades of salt iodisation programs, thyroid disorders still affect over 42 million people, with around 12% of adults showing palpable goitre. Autoimmune thyroid disease now surpasses iodine deficiency as a major cause in iodine-sufficient areas, and national efforts have not produced a marked decline in goitre prevalence. [4,5,6]

Goitre prevalence, ranging between 5% and 10%, is often linked to inadequate urinary iodine excretion and/or subnormal levels of TSH among all age groups.[7] Clinically, it presents as either asymptomatic, thyroid dysfunction, or obstructive types and may manifest with hypothyroidism, hyperthyroidism or euthyroidism.[8] Diagnosis involves assessing TSH, T3, T4 levels, with anti-thyroid peroxidase (anti-TPO) and anti-thyroglobulin antibodies aiding in identifying autoimmune causes or genetic mutations. [9] Complications such as tracheal compression, haemorrhage or necrosis can occur.[2] Conventional management includes levothyroxine suppressive therapy, radioactive iodine ablation, and surgery for large or malignant cases [8,10]; however, levothyroxine therapy often fails to prevent recurrence, and radioiodine may result in long-term adverse effects of hypothyroidism. [9,11] While previous research has reported that Homoeopathic constitutional treatment can improve thyroid hormonal balance, this study aims to address the peak prevalence of goitre cases in the Kanyakumari region by systematically evaluating the clinical and biochemical outcomes of individualised homoeopathic management, despite sustained iodine supplementation and established thyroid management protocols.

MATERIALS AND METHODS:

A retrospective observational case series study was conducted by reviewing records of 15 diagnosed goitre cases treated in the inpatient and outpatient departments (IPD & OPD) of Sarada Krishna Homoeopathic Medical College, Kulasekharam, from January 2016 to December 2022.

Inclusion criteria

Patients of all age groups and genders with elevated TSH and abnormal anti-TPO Ab or anti-Tg Ab with low or normal tri-iodothyronine (T3) and thyroxine (T4) were included.

Exclusion criteria

Pregnant, post-partum and lactating women, malignant thyroid cases, and subjects with other autoimmune disorders were excluded.

Sampling method

Non-random purposive sampling was employed.

Outcome measures

Primary outcome measures included changes in TSH, T3 and T4 levels before and after treatment. Secondary outcomes involved clinical symptom evaluation using Zulewski's hypothyroid scoring system.

Data collection and analysis

Demographic data, clinical types of goitre, remedies prescribed, and treatment duration were recorded. Results were analysed descriptively; categorical variables were expressed as percentages. The improvme-

nt trend was visualised through comparative charts.

RESULTS:

Among the 15 subjects, 40% were in the 31 – 40 years of age group. All were female (female-to-male incidence ratio = 15:0), consistent with known higher female susceptibility to thyroid dysfunction. Diagnostic analysis revealed that 40% of 15 cases were diffuse goitres, 13% multinodular goitres, 13% nodular goitres, 13% colloid goitres, and 7% dyshormonogenic goitres.

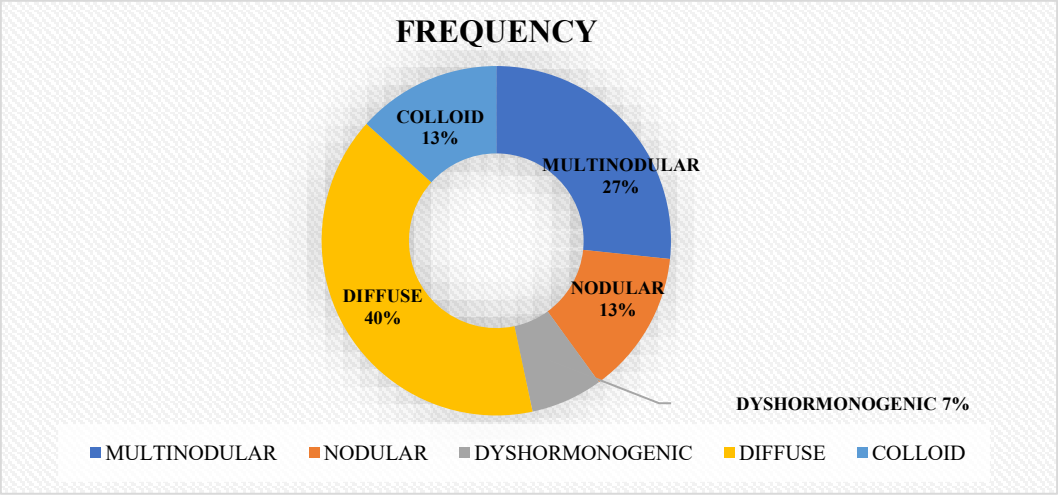

FIG. 1: DISTRIBUTION OF CASES ACCORDING TO TYPES OF GOITERS

Significant improvement was observed in 2 cases (13%), regression in 1 case (7%), accounting for the hyperthyroid state, and the rest, 12 (80%), maintained steady levels of T3. T4 levels were observed for significant improvement in 3 cases (20%), regression in 3 cases (20%), accounting for hyperthyroid state, and the rest 9 (60%) maintained steady levels. TSH values obtained before and after treatment signify 4 (27%) out of 15 cases maintained steady levels, 8 cases (53%) showed marked improvement, and 3 (20%) showed regression, indicating the hyperthyroid state.

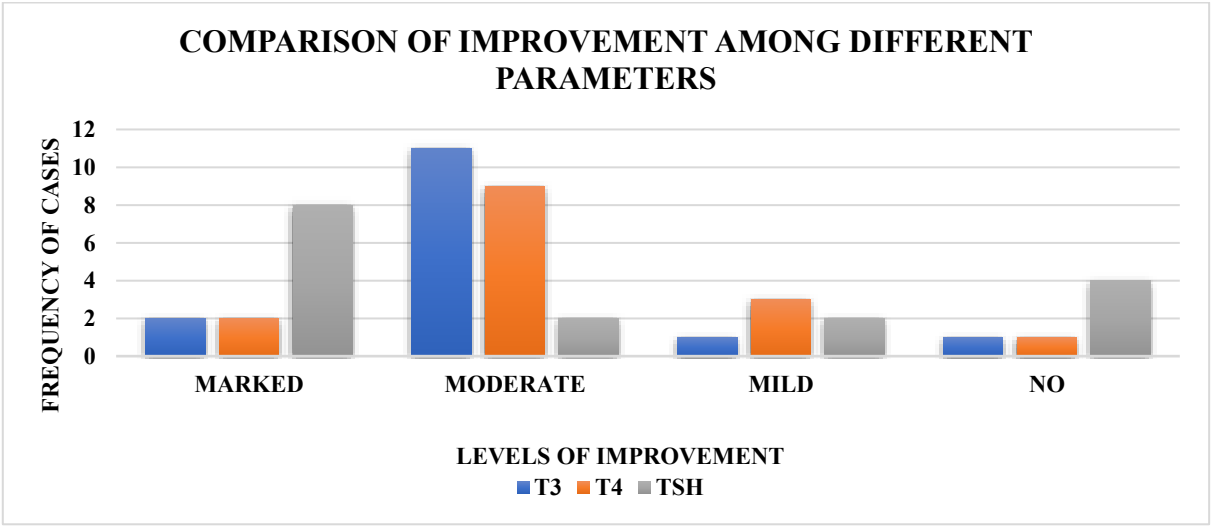

FIG. 2: COMPARISON OF IMPROVEMENT AMONG DIFFERENT PARAMETERS IN GOITRE

Assessment of treatment duration reveals improvement of 1 case (6.66 %) each in the 2nd, 3rd, 6th, and 8th months; 2 cases (13.33 %) each in the 5th, 9th, and 12th months; 5 cases (33.33 %) in more than a year. Symptomatic relief in patients assessed with a Zulewski score reveals marked improvement in 2 cases (13 %), moderate improvement in 7 cases (47 %), mild improvement in 5 cases (33 %) and nil improvement in 1 case (7 %).

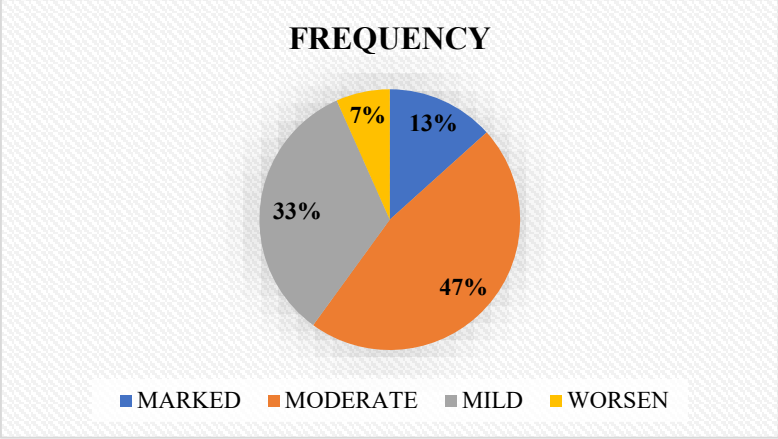

FIG. 3: DISTRIBUTION OF CASES ACCORDING TO IMPROVEMENT

Of 15 cases, 5 cases were administered with Natrum muriaticum (33%), 3 cases were administered with Calcarea iodatum (20%), and the remaining cases were administered with Bromium, Calcarea carbonicum, Lycopus virginicus, Phosphorus, Sepia oficinalis, Spongia tosta, and Tuberculinum to one case each.

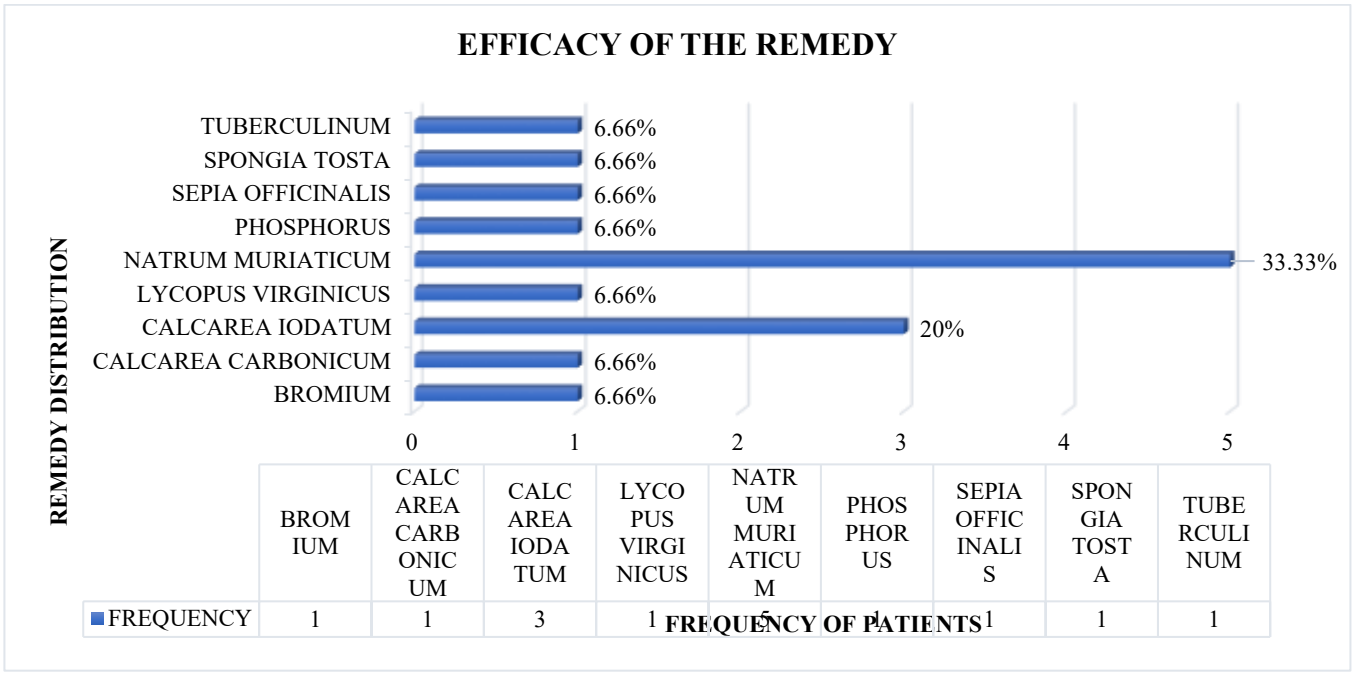

FIG. 4: DISTRIBUTION OF CASES BASED ON MEDICINES ADMINISTERED

DISCUSSION

The National Family Health Survey V (NFHS-V), conducted between 2019 and 2021 in India, reveals that prevalence increases with age in women: 0.6% in 15-19 years, 2.3% in 20-34 years, and 4.1% in 35-49

years, which aligns with my study.[12,13] It also ranks Tamil Nadu seventh among other states.[13] A survey conducted in Central India also reported a higher incidence of total thyroid disorders between 31-50 years.[14] Another comparative epidemiological study in districts of Denmark showed an increased prevalence of goitre in the 40-45 year age group.[15] The female-to-male incidence ratio was recorded as 15:0 in my study, corresponding with a statistical survey indicating a nearly 2% prevalence of goitre in females versus less than 1% in males.[12] A retrospective study on thyroid disorder incidence in central India found 82% in females and 34% in males.[14] A survey of 3023 children in the Udupi district found a 19.8% prevalence of goitre, primarily among females, which increased with age.[16] A study on patients aged 55 and above identified the causes as predominantly non-toxic multinodular goitre, toxic multinodular goitre, or simple goitre.[17] Benign thyroid diseases had a higher prevalence, with colloid goitre being the most common.[14] A decrease in neck circumference was successfully reported in a case report with no abnormality in the review USG and normalisation of neck circumference; whereas this study reports only a minimal reduction in neck circumference. [18] A hyperthyroid multinodular goitre treated with Iodum 200C reported an effective reduction in goitre size and normalisation of thyroid hormone profile.[19] Various studies report that the majority of goitre cases are euthyroid, with a significant minority prevalence of hypothyroid and hyperthyroid goitres. This study also reports the majority of 11 euthyroid goitre cases (73%), 3 hypothyroid goitre cases (20%) and 1 hyperthyroid goitre case (7%). [20,21,22]

Studies also highlighted the presence of toxic metals in Kanyakumari's soil, especially Plumbum,[23] which was found in higher content when comparing healthy and goitrous thyroid tissues.[24] Studies show the effectiveness of Lycopodium and Sulphur in the treatment of colloidal nodular goitre[25,26], and Phosphorus in multinodular goitre.[18] Thyroidinum, Bromium, Calcarea carbonicum, Crotalus cascavela, Iodum, Fluoric acid, and Spongia tosta were effective in the treatment of simple non-toxic goitre and prevented progression into overt hypothyroidism.[4,27,28,29] Natrum muriaticum, Phosphorus, Iodum, Thyroidinum, Lachesis, Conium maculatum and Belladonna hierarchically have proved effective in hyperthyroid states.[30] The constitutional approach showed successful treatment of hypothyroidism without the fear of recurrence and is essential for ruling out the complications of untreated or maltreated hypothyroidism.[31] Homoeopathic medicine, when used as primary therapy or an adjunct to conventional medicine, reduces drug dependency and the dosage of L-thyroxine via penetration of the hypothalamus-pituitary axis plays an important role in immune modulation at the cellular level. It has proven effective in curing subclinical hypothyroidism and hyperthyroidism and managing their sequelae of depression and obesity.[32]

Secondary psychopathology of hyperthyroidism is likely to be depression and psychosis; anxiety and mood disorders in both manic and depressive states. [33,34,35,36] Hypothyroidism is often associated with psychomotor retardation, increased drowsiness, and cognitive impairment of varying severity.[34] Stress and emotional states can affect immune function and health, while the stress axis affects thyroid function, growth and metabolic processes.[37]

Statistical analysis

Data were analysed using SPSS version 25.0 and Microsoft Excel 2021. Descriptive statistics (mean ± SD, median, range) were calculated for thyroid function test parameters – T3, T4, and TSH – before and after homoeopathic treatment. Paired t-tests were used for normally distributed data, and the Wilcoxon signed rank test was used for skewed data. Significance level was fixed at $p < 0.05$ (two-tailed).

Parameter	Pre-treatment Mean ± SD	Post-treatment Mean ± SD	Mean Change (Post–Pre)	Test Used	Test Statistic	p-value	Interpretation
T3 (ng/dL)	89.98 ± 42.36	97.21 ± 28.05	+7.23	Paired t-test	t = –0.70	0.49	Not significant
T4 (µg/dL)	6.70 ± 3.31	6.96 ± 2.80	+0.26	Paired t-test	t = 0.16	0.88	Not significant
TSH (mU/L)	23.17 ± 30.60	21.55 ± 35.83	–1.62	Wilcoxon signed-rank	V = 17	0.048	Borderline significant ↓

Interpretation:

The mean T3 and T4 levels showed no statistically significant changes after treatment, indicating maintenance of near-euthyroid states. However, mean TSH levels demonstrated a borderline significant reduction (p=0.048). This suggests an overall improvement in thyroid regulation in several patients following constitutional homoeopathic therapy.

CONCLUSION

This retrospective case series of 15 patients with non-malignant goitre managed with individualised Homoeopathic remedies found stable serum T3 and T4 levels pre- and post-treatment, along with a clinically meaningful trend in thyroid-stimulating hormone (TSH) improvement after excluding outliers. Approximately 60% of patients experienced moderate to marked symptomatic relief, and 80% maintained euthyroid status, suggesting a potential benefit of individualised homoeopathic therapy in stabilising thyroid function. However, caution is warranted due to limitations such as a small sample size, a retrospective design, and a lack of randomisation, which hinder definitive conclusions.

LIMITATIONS

The findings offer preliminary support for individualised homoeopathic management in goitre but call for larger, controlled studies to validate these results and clarify the therapeutic role of homoeopathy in thyroid disorders.

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