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A Retrospective Study on Patients who Have Undergone Surgery For Goiter with Final Pathological Diagnosis of Hashimoto's Thyroiditis

*Sundararajan G[1], Ganesan R[2]
[1](Asst. Professor, Department of General Surgery, Madurai Medical College, India)
[2](Former Asst. Professor Department of General Surgery, Madurai Medical College
Currently Professor, Department of General surgery, Velammal Medical College, Madurai)
Corresponding Author: *Sundararajan G*

Abstract : *Hashimoto's Thyroiditis is common cause of hypothyroidism with goiter in Iodine sufficient regions due to chronic auto immune disease. Patients with Hashimoto's Thyroiditis present either a small diffuse goiter or markedly enlarged firm gland mimicking malignancy. These patients may have an associated dominant nodule, most commonly a benign colloid, adenomatous nodule, nodular thyroiditis, or a Hurthle cell nodule, and less commonly an associated malignancy. We studied the incidence, gender and age preponderance, clinical nature and functional status, indications and type of thyroidectomy done and clinical outcome following surgical management. During the study period, 428 cases of thyroidectomy surgeries were performed of which 63 patients were diagnosed to have Hashimoto"s thyroiditis (14.72%). Even though Hashimoto's Thyroiditis as a pathological entity rarely warrants surgical intervention,many clinicopathological conditions associated with Hashimoto's Thyroiditis may need surgery such as nodular goiter, malignancy, pressure symptoms. We analyzed the incidence of Hashimoto's Thyroiditis in thyroidec to mised patients*

Keywords: *Goiter, Hashimoto's, Nodule, Thyroidectomy, Thyroiditis*

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I. Introduction

Hashimoto's Thyroiditis is common cause of hypothyroidism with goiter in Iodine sufficient regions due to chronic auto immune disease [1]. Patients with Hashimoto's Thyroiditis present either a small diffuse goiter or markedly enlarged firm gland mimicking malignancy. These patients may have an associated dominant nodule, most commonly a benign colloid, adenomatous nodule, nodular thyroiditis, or a Hurthle cell nodule, and less commonly an associated malignancy. Surgical management for Hashimoto's Thyroiditis most commonly is recommended because of suspicion of cancer or for relief of compressive symptoms in patients who develop a nodular or diffuse goiter. Patients with a large goiter can manifest with local compressive symptoms such as dysphagia, dyspnea, and hoarseness that may require surgery for relief of compression. Because of reports of variable outcome and morbidity, thyroidectomy as a treatment for Hashimoto's Thyroiditis, and if performed, the type of thyroidectomy, has always been a controversial issue This study aims to analyze incidence of Hashimoto's Thyroiditis in thyroidectomy patients, age and sex variation, clinical presentation, endocrine functional status FNAC and to discuss indication, procedure done, intra and postoperative complications and the outcome of surgery.

II. Aims And Objectives

The aim of this study is

To study the incidence of Hashimoto's Thyroiditis associated Goiters among Thyroidectomy patients.

To study the various clinical presentation and analyze the endocrine functional status of the thyroid gland of patients with Hashimoto's Thyroiditis associated Goiter.

To study the clinical outcome, associated pathological conditions with Hashimoto"s Thyroiditis in operated goiters and relief of symptoms following surgical management.

To study the age and sex distribution of patients having Hashimoto's Thyroiditis associated Goiter

III. Materials And Methods

This is a Retrospective observational study conducted in the Surgical unit at Government Rajaji Hospital, Madurai who caters districts of Iodine sufficient areas over a period of two years from November

2011 to October 2013 All patients who underwent thyroid surgery during the study period provided clinical data for the study. Of them, patients who were detected as Hashimoto's Thyroiditis by post-operative histopathological report or by preoperative FNAC who underwent thyroid surgery for associated symptoms form our study group cohort. The clinicopathological data were collected from registers and case records, confirmed with pathology department and reviewed for follow up and health status. The pathologist opinion regarding the histopathology was accepted without further evaluation. The inclusion criteria for selection of study group were thyroidectomy patients with final histopathological diagnosis of Hashimoto's Thyroiditis either as sole finding or associated with other pathologies. Diagnostic criteria for Hashimoto's Thyroiditis include lymphocytic infiltration of the stroma, Hurthle cell change of the follicular epithelium, distribution of lymphoid tissue within and around lobules with prominent germinal centers, and the presence of Histiocytes, plasma cells and scattered intra follicular multi nucleated giant cells with or without fibrotic elements.A number of patients underwent thyroidectomy with preoperative diagnosis of hashimoto's thyroiditis but, among them whose post-operative hpe did not support the presence of hashimoto's thyroiditis were excluded from the study.patients clinical and health status with regard to symptom relief, psychological well-being and residual / recurrent goiter were recorded during the follow up period

IV. Results

During the study period, 428 cases of thyroidectomy surgeries were performed, of which 63 patients were diagnosed to have Hashimoto‟s thyroiditis. (14.72%). Out of total 63 patients, 57 patients (90.48%) were females and 6(9.52%) were males. male to female ratio was found to be 1:9.5. In the present study females were found to be more commonly affected. Age distribution of the patients affected ranged from 22-70 years in the present study. The maximum number of cases 22(34.92%) studied were in the age group of 31 to 40. The next most common age group found to be affected was in the range between 21 to 30. All the 63 patients presented with history of swelling in front of the neck, of which 6 patients had features of hyperthyroidism and only 2 patients presented with associated obstructive symptoms of dysphagia. The duration of swelling in our study ranged from 2 months to 3 years. Maximum number of cases (49.21%) presented within six months of noticing the swelling. Almost 85.72% of patients presented within 1 year of noticing the swelling. In our study, multinodular goiter was the main mode of presentation. Out of sixty three cases studied, 39 cases (61.9%) presented as multinodular goiter. The next common mode of presentation was diffuse goiter of 18 cases (28.57%). 3 patients (4.76%) presented with solitary nodule and 3 patients (4.76%) presented as goiter with cervical lymphadenopathy[2]. In our study, multinodular goiter was the main mode of presentation. Out of sixty three cases studied, 39 cases (61.9%) presented as multinodular goiter. The next common mode of presentation was diffuse goiter of 18 cases (28.57%). 3 patients (4.76%) presented with solitary nodule and 3 patients (4.76%) presented as goiter with cervical lymphadenopathy. 4patients (6.34%) showed associated Rheumatoid arthritis. One patient had vitiligo (1.58%). Out of 63 cases 19 patients had associated diabetes mellitus, since the type of diabetes was not classified, the association between hashimoto's thyroiditis and diabetes could not be determined. Out of the 63, 57 patients underwent preoperative fine needle aspiration cytology except 6 thyrotoxic patients. Hashimoto's Thyroiditis was diagnosed by presence of lymphocytes, multi nucleated giant cells, oxyphilic epithelial cells with scanty colloid [3]. Out of cases that underwent FNAC, Hashimoto's Thyroiditis was reported in 10 patients (15.87). In 16 patients the FNAC was reported as colloid goiter (25.40%). The most commonly reported finding was adenomatous goiter which was found in 23 cases (39.68%). There was suspicion / proven malignancy in 3 cases (4.76%). The FNAC was inconclusive in 5 cases (7.94%) and was not done in 6 cases (9.52%) of thyrotoxicosis due to fear of hemorrhage and thyroid crisis [4]. Among sixty three cases of Hashimoto's Thyroiditis 23(36.54%) patients presented in Euthyroid state out of which six were diffuse goiter and sixteen multinodular goiters.

Thirty four patients presented in hypothyroid state out of which eleven were diffuse goiter, twenty four were multinodular goiter and two solitary nodular goiters. Six presented in hyperthyroid state out of which four were diffuse goiter and two multinodular goiters. In our study the most frequent indication for surgery in patients with Hashimoto's Thyroiditis was Multi nodular goiter or colloid goiter (74.6%).Persistent goiter after thyroxine therapy formed the next common indication for surgery which accounted for 15.87%. Toxic goiter accounted for 9.52% of cases (6 cases). Other indications were for suspicion of malignancy in 2 cases. Surprisingly no surgery was done for pressure symptoms or painful thyroiditis [5]. The commonest procedure done was near total thyroidectomy done which accounted for 51 cases (80.9%) out of which 49 were females and 2 were males followed by total thyroidectomy which was performed in 6 cases (9.52%). Therapeutic neck dissection was done along with total thyroidectomy in 3 cases (4.76%). In our study, none of the patients had intra operative or postoperative mortality. Transient hypocalcaemia occurred in four patients during postoperative period which improved by oral calcium and alpha D_3 treatment. None of the patients had recurrent laryngeal nerve injury [6]. Out of the total 63 cases,

only hashimoto's thyroiditis changes was confirmed to be present diffusely throughout the gland and documented in the final histopathology report in 37 cases (58.73%). Hashimoto's thyroiditis as reported in association with multinodular goiter in 10 cases (15.87%) where as in association with colloid goiter in 11 cases (17.46%). Hashimoto's thyroiditis was reported in association with papillary carcinoma in 1 case (1.58%) and with anaplastic carcinoma in 1 case (1.58%). Solitary nodule was reported in association with hashimoto's thyroiditis in 3 cases (4.76%).

V. Conclusion

Sixty three patients were diagnosed to have Hashimoto's Thyroiditis in the study period from November 2011 to October 2013. The study was conducted at Department of Surgery, GRH, Madurai. The findings of our study were compared with that of the available literature. In our institute the incidence of Hashimoto"s thyroiditis among patients who underwent thyroidectomy was found to be about 15%. In this study there was a definite female preponderance with females accounting for 90% of patients diagnosed with hashimoto's thyroiditis. The male to female preponderance was found to be 1:9.5 in our study. The maximum number of patients with hashimoto's thyroiditis was in the age group of 31-40 years (35%). Most of the patients (49%) presented within 6 months of noticing the neck swelling, and almost 85% presented within 1 year duration. In this study, about 62% of patients presented with multinodular goiter. Most common functional status in patients presenting with hashimoto's thyroiditis was hypothyroidism.54% of patients presented as goiter with hypothyroidism. Out of patients who presented as euthyroid about 23% were subclinical hypothyroid. Associated Rheumatoid arthritis and vitiligo were present in 5 patients.

In this study, out of 63 patients who were post surgically confirmed hashimoto's thyroiditis, only 16% had preoperative FNAC positive for hashimoto's thyroiditis.In this study, multi nodular goiter with hypothyroidism is the commonest presentation comprising 34%. Nodular goiter formed the most common indication and Near total thyroidectomy was the commonest surgery performed in patients with hashimoto's thyroiditis. In our study, most common associated pathology reported in the final HPE report with hashimoto's thyroiditis was colloid goiter. Malignancy was reported in association with hashimoto's thyroiditis in 2cases (1 anaplastic &1 papillary ca) [7].

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