

A clinico-pathological study of Thyroiditis

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Abstract

Thyroiditis is the inflammation of the thyroid gland due to various causes like autoimmune disorders, infections, drugs, exposure to physical agents, radiation and without any apparent predisposing factors. This leads to progressive inflammation and replacement of gland by fibrous tissue, if it is chronic. Hence the patient might have initial thyrotoxic phase followed by progressive hypothyroidism. Hence this study was conducted to describe the common causes of thyroiditis in day to day practice. Hashimoto thyroiditis was the most common cause followed by lymphocytic thyroiditis. It was commonly seen in young females. The commonest complaint was swelling, followed by pain. The thyroid was enlarged and tender on palpation in majority of the cases. At the time of presentation, 4 had recurrent laryngeal nerve palsy and 1 had dyspnoea. On investigating, 4 patients had Hashi-thyrotoxicosis. Hashimoto patients had hypothyroidism. Those with intractable pain, pressure symptoms, cosmetic reason and lymphoma underwent thyroidectomy. Most common post-operative complications were recurrent laryngeal nerve palsy and hypocalcaemia.

Keywords: Thyroiditis; Hashimoto; Hypothyroidism; Riedel.

1. Introduction

Thyroiditis, long recognised as a clinical entity, may develop in association or as a complication of autoimmune disorders, variety of infections, after exposure to certain physical agents, radiation, drugs (amiodarone, interferons) and also without apparent predisposing factors. The recent increase in the reported incidence of thyroiditis is unexplained, but an enhanced awareness on the part of treating doctor together with more definitive diagnostic procedures may account in part for the current frequent recognition of the disorder. Although the clinical and laboratory manifestations of thyroiditis vary considerably, these data often correlate well with the type and severity of the inflammatory process affecting the thyroid gland [1-3]. Thyrotoxicosis (transient) is the term used with thyroiditis, since the thyroid gland is not overactive, as in the case of hyperthyroidism [4,5]. Most of the thyroiditis patients eventually end up in hypothyroidism.

Forms of the disease are Hashimoto thyroiditis (the most common cause of hypothyroidism), postpartum thyroiditis, subacute thyroiditis, silent thyroiditis, drug-

induced thyroiditis, radiation-induced thyroiditis, acute thyroiditis and Riedel thyroiditis [6].

2. Materials and methods

A prospective study was conducted in Victoria Hospital, affiliated to Bangalore Medical College and Research Institute, Bangalore, India. The study was approved by the Institutional Ethical Review Board. Written informed consent was obtained from each study subject at the time of enrolment.

A total of 50 patients who presented with thyroiditis were included. Patients below 18 years of age were excluded. After taking detailed history and clinical examination; relevant blood, radiological and pathological investigations were done to arrive at the final diagnosis. The patients were managed appropriately based on the diagnosis and surgical indications.

Data was collected, compiled, tabulated and analysed using Microsoft Excel.

3. Results

This was a prospective study of 50 patients diagnosed to have thyroiditis.

Table 1: Diagnosis

	Hashi-toxicosis	Lymphocytic thyroiditis	Hashimoto thyroiditis	De Quervain thyroiditis	Total
Frequency	4	12	33	1	50
Percentage	8	24	66	2	100

It can be noted that Hashimoto thyroiditis is the commonest cause followed by lymphocytic thyroiditis.

Table 2: Age distribution (in years)

	Hashi-toxicosis	Lymphocytic thyroiditis	Hashimoto thyroiditis	De Quervain thyroiditis	Total
<20	0	1	1	0	2
21-30	3	4	23	0	30
31-40	1	7	8	0	16
41-50	0	0	1	0	1
>50	0	0	0	1	1
Total	4	12	33	1	50

Thyroiditis is the disease of the young commonly seen in the age group of 21-30 years, followed by 31-40 years' group.

Table 3: Sex distribution

	Hashi-toxicosis	Lymphocytic thyroiditis	Hashimoto thyroiditis	De Quervain thyroiditis	Total
Male	0	1	1	0	2
Female	4	11	32	1	48
Total	4	12	33	1	50

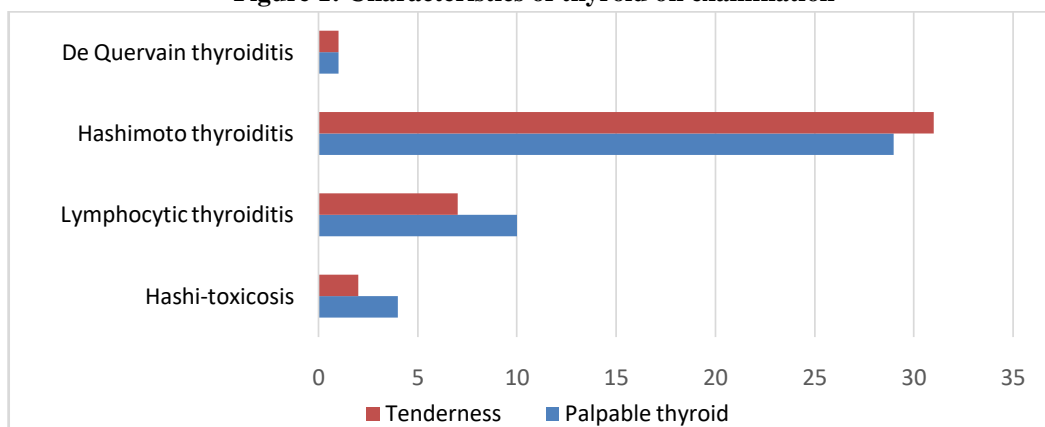
Thyroiditis is a disease of the female [5].

Table 4: Presenting symptoms

	Hashi-toxicosis	Lymphocytic thyroiditis	Hashimoto thyroiditis	De Quervain thyroiditis	Total
Swelling	4	10	29	1	44
Pain	2	7	31	1	41
Dyspnoea	0	0	0	1	1
Dysphagia	0	0	0	0	0
Recurrent laryngeal nerve entrapment	1	0	2	1	4
Hyperthyroidism	4	0	0	0	4
Hypothyroidism	0	0	33	0	33

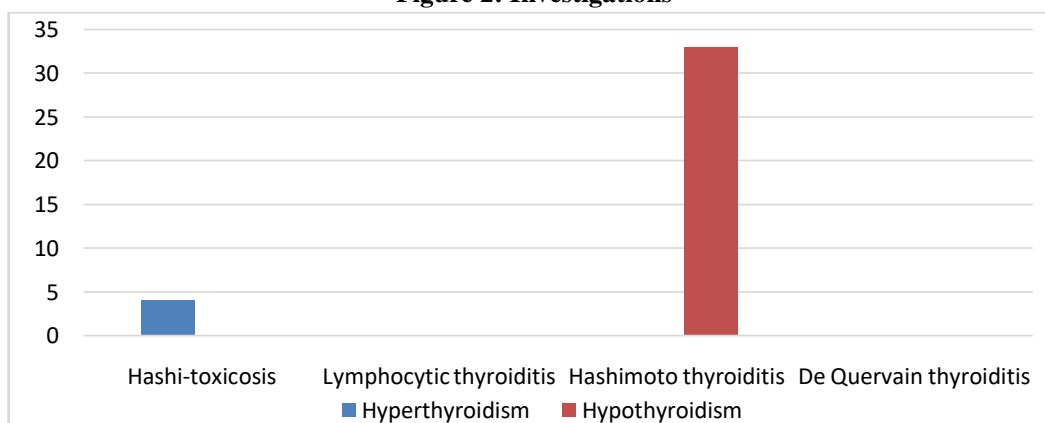
Main complaint was swelling in the neck which is usually the first symptom[7], followed by pain. Hashi-toxicosis and Hashimoto thyroiditis had hyperthyroidism and hypothyroidism respectively.

Figure 1: Characteristics of thyroid on examination



44 had a palpable thyroid. 41 had tenderness.

Figure 2: Investigations



Hashi-toxicosis and Hashimoto thyroiditis had hyperthyroidism and hypothyroidism respectively.

Table 5: Treatment

	Hashi-toxicosis	Lymphocytic thyroiditis	Hashimoto thyroiditis	De Quervain thyroiditis	Total
Surgery	1	7	12	0	20
Conservative	3	5	21	1	30
Total	4	12	33	1	50

Patients with pain and pressure symptoms not relieved by medications; and for cosmetic reasons were operated. A patient diagnosed to have concomitant lymphoma was also operated.

Table 6: Complications of thyroiditis per se

	Hashi-toxicosis	Lymphocytic thyroiditis	Hashimoto thyroiditis	De Quervain thyroiditis
Dyspnoea	0	0	0	1
Dysphagia	0	0	0	0
Recurrent laryngeal nerve entrapment	1	0	2	1
Lymphoma	0	0	1	0

2 and 1 patients with Hashimoto thyroiditis had recurrent laryngeal nerve (RLN) entrapment and co-existent lymphoma respectively. De Quervain thyroiditis patient presented with RLN palsy and dyspnoea.

Table 7: Complications after surgery

	Hashi-toxicosis	Lymphocytic thyroiditis	Hashimoto thyroiditis
Recurrent laryngeal nerve palsy	0	0	2
Superior laryngeal nerve palsy	0	1	0
Hypocalcaemia	0	1	1

2 and 1 patients respectively developed RLN and superior laryngeal nerve (SLN) palsy after surgery. 2 developed hypocalcaemia due to hypoparathyroidism.

4. Discussion

From the above mentioned results it can be concluded that thyroiditis occurs mainly in young female patients. Commonly presents as pain and swelling in the neck followed by local compressive symptoms. Diagnosis is by clinical, radiological and pathological investigations. Patients with intractable pain, complications, lymphoma and cosmetic reasons underwent surgery. Rest were treated conservatively using NSAIDs and steroids (if required) with thyroid replacement in those who were hypothyroid [8]. Anti – thyroid drugs were used for hyperthyroid patients. Post-operative complications frequently noted were RLN palsy and hypocalcaemia.

5. Conclusion

It can be concluded that thyroiditis is mainly caused by lymphocytic inflammation commonly due to Hashimoto thyroiditis. But other rare causes like De Quervain, Riedel and acute suppurative thyroiditis can also be present. Hence careful and meticulous evaluation of these patients must be done to diagnose and treat the disease.

Conflict of interest: We have no conflict of interest to declare.

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