Hashimoto Thyroiditis Presenting as Long-Standing Neck Swelling: A Case Report With Review of Literature

Nanda Patil[1], Drashti Maradiya[2]

[12] Department of Pathology, Krishna Institute of Medical Science, Krishna Vishwa Vidyapeeth Karad, Maharashtra, India.

***Correspondence Author**

DOI: https://doi.org/10.51584/IJRIAS.2025.101100053

Received: 21 November 2025; Accepted: 28 November 2025; Published: 11 December 2025

ABSTRACT

Background

Hashimoto thyroiditis is an autoimmune disorder characterized by gradual destruction of thyroid follicular cells,leading to progressive hypothyroidism. It is the most common cause of thyroid dysfunction in iodine-sufficient regions and shows marked female predominance. Surgical evaluation is required when malignancy cannot be excluded**.**

Case Report

A 35 year old female presented with a slowly progressive swelling on right anterior neck for 8 years. She was a known case of hypothyroidism and was on medication. Histopathological examination on total thyroidectomy specimenconfirmed Hashimoto thyroiditis.

Conclusion

Hashimotothyroiditis presents in young individuals with long-standing goiters that can mimic neoplastic lesions**.**Surgical intervention is required in cases with compressive symptoms**.**Early recognition and appropriate evaluation are essential for accurate diagnosis and effective management.

Keywords: Hashimoto thyroiditis, Hypothyroid, Long standing neck swelling.

INTRODUCTION

Hashimoto thyroiditis is a chronic autoimmune disorder in which ongoing immune-mediated injury progressively destroys thyroid follicular cells. This process is driven by a cell-mediated immune response and increased production of thyroid autoantibodies [1]. In iodine-sufficient regions, it represents the most frequent cause ofhypothyroidism. The condition is distinctly more common in females [2].

We report a case of Hashimoto thyroiditis in a 35-year-old woman with eight-year history of midline neck swelling.

Case Report

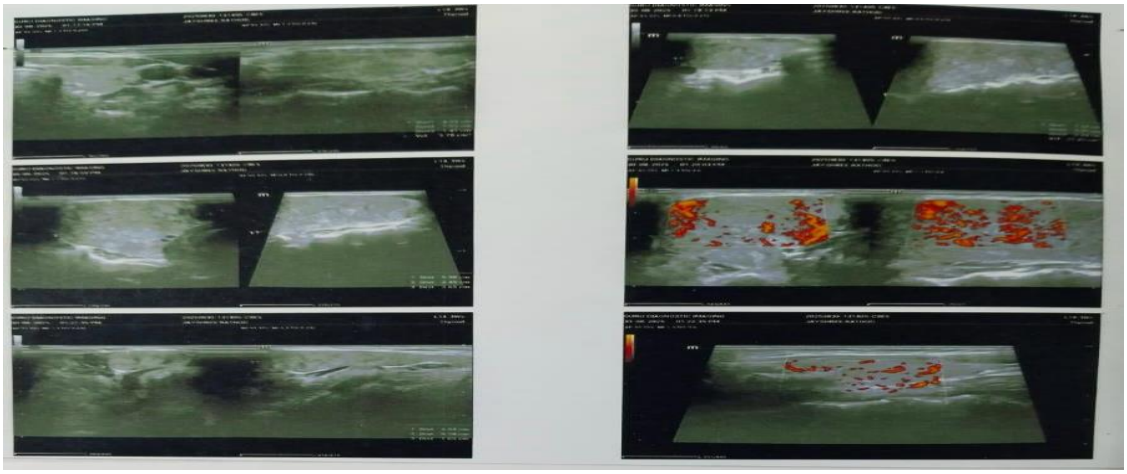
A 35-year-old female presented with history of midline neck swelling. She was a known case of hypothyroidism and was taking Tab. Eltroxin. She additionally reported irritability, tiredness.

Ultrasonography of the thyroid revealed a hypoechoic lesion measuring 59 × 25 × 36 mm in the right lobe(Figure 1). Serum T4 and TSH levels were within normal limits as patient was on hypothyroid treatment.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue XI November 2025

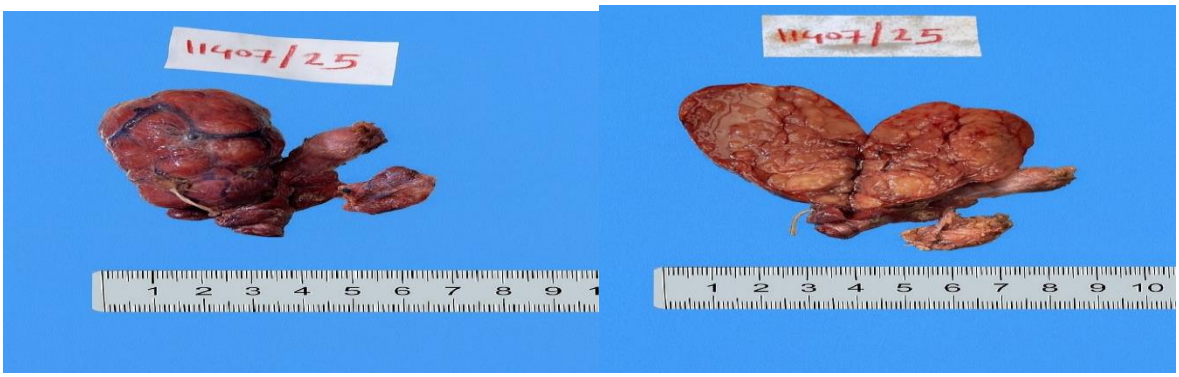
FNAC performed at an outside center yielded a diagnosis of atypia of undetermined significance (AUS), Bethesda category III.

Figure 1: Ultrasonography of the thyroid revealed a hypoechoic lesion



A total thyroidectomy specimen was received for histopathological examination. Grossly, the thyroid gland appeared grey-brown, encapsulated, and slightly irregular on its external surface. The right lobe measured 7.5 × 4 × 2.6 cm and showed a grey-brown, nodular, waxy cut surface. The left lobe measured 3 × 1.5 × 0.5 cm, and theisthmus measured 1.2 × 1 × 0.4 cm

Figure 2: Enlarged thyroid gland, on c/s- nodular and waxy



Microscopy demonstrated diffuse lymphocytic infiltration of the thyroid parenchyma with multiple well-formed germinal centers. Thyroid follicles were atrophic and lined by Askanazy cells. The stroma exhibited variable degrees of fibrosis. These findings were consistent with Hashimoto thyroiditis.

One month post-operative follow up of patient is uneventful.

Figure 3: Microscopy revealed lymphoid follicles replacing normal thyroid parenchyma(100X H&E)

Figure 4: Microscopy revealed atrophic thyroid follicles lined by Askanazy cells(100X H&E)

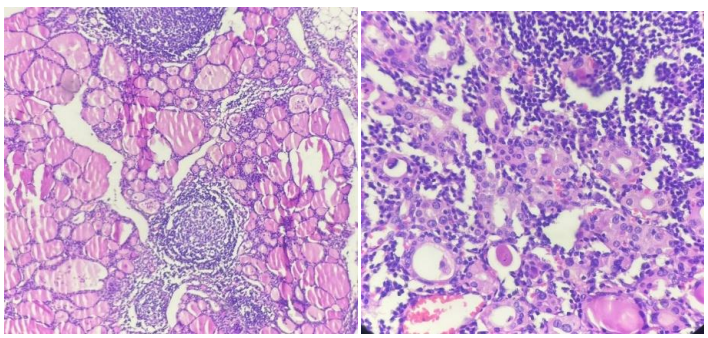


Figure 3 **Figure 4**

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue XI November 2025

DISCUSSION

Hashimoto thyroiditis commonly affects women, with reported female-to-male ratio ranging from 7:1 to 10:1 [3]. Our case was also a 35-year-old female. The incidence of Hashimoto thyroiditis increases with age, typically between 45 and 55 years, although younger individuals, as in this case, may also be affected [3]. Genetic influences play an important role, with several susceptibility loci involving the HLA complex, immune-regulatory genes, and thyroid-specific genes such as the TSH receptor and thyroglobulin [4-5]. The disease is more frequently observed in individuals with Turner syndrome and Down syndrome [6-7]. However, our patient had no associated syndromic history.

Depending on the severity of thyroid enlargement, patients may present with compressive symptoms such as dysphagia, respiratory difficulty, stridor, or dysphonia due to involvement of the esophagus or trachea. When ultrasonography reveals suspicious nodularity, fine-needle aspiration cytology (FNAC) is typically recommended, and thyroidectomy may be performed if malignancy cannot be excluded [8-9].

Elevated thyroid autoantibodies correlate with disease activity [10]. Thyroid ultrasonography is helpful for assessing gland enlargement and nodularity. FNAC is routinely used for evaluation of suspicious lesions but may occasionally yield false-negative or indeterminate results, as in our case.

Histopathology remains the definitive diagnostic method, characteristically showing lymphocytic infiltration, follicular destruction, plasma cells, macrophages, and occasionally multinucleated giant cells and atrophic follicles lined by Askanazy cells [11]. Although many patients remain euthyroid initially, they have an increased risk of developing overt hypothyroidism, with an estimated progression rate of about 5% per year [12].Hashimoto thyroiditis are at risk for a rare thyroid malignancy: primary thyroid lymphoma [3]. Thyroid peroxidise antibody and Thyroglobulin antibody are most Common antibodies found in Hashimoto thyroiditis, however these tests were not done in our case as the patient was not able to afford them [13]. The relation between HT and thyroid epithelial cancers is controversial, with some molecular and morphological studies suggesting a predisposition to papillary carcinoma [14].

CONCLUSION

Hashimoto thyroiditis presents in young individuals with long-standing goitersthat can mimic neoplastic lesions**.** Surgical intervention is required in cases with compressive symptoms**.** Early recognition and appropriate evaluation are essential for accurate diagnosis and effective management. A combined clinical, imaging, and pathological approach ensures accurate diagnosis and appropriate management, especially in younger patients with atypical or prolonged presentations.

REFERENCES

1. Lichiardopol C, Moţa M. The thyroid and autoimmunity. Rom J Intern Med. 2009;47(3):207-215.
2. Karunarathmal, PN Rodrigo, S Ranssinghe', Senanayalal, Jayawardana “Hashimoto Thyroiitis: A Comprehensive Review Of Pathogenesis, Diagnosis, And Managenent Strategies In Autoimmune Thyroid Disease”Uva Clinical Anaesthesia And Intensive Care Issn 2827-7198 . June 22 ,2025.
3. Jasleen Kaur; IshwarlalJialal “ Hashimoto Thyroiditis“ Last Update: February 9, 2025
4. Zaletel K, Gaberšček S. Hashimoto's Thyroiditis: From Genes to the Disease. Curr Genomics. 2011 Dec;12(8):576-88.
5. Qiu K, Li K, Zeng T, Liao Y, Min J, Zhang N et al. Integrative Analyses of Genes Associated with Hashimoto's Thyroiditis. J Immunol Res. 2021;2021:8263829.
6. Aversa T, Messina MF, Mazzanti L, Salerno M, Mussa A, Faienza MF et al. The association with Turner syndrome significantly affects the course of Hashimoto's thyroiditis in children, irrespective of karyotype. Endocrine. 2015 Dec;50(3):777-82.
7. Amr NH. Thyroid Disorders in Subjects with Down Syndrome: An Update. Acta Biomed. 2018 Mar 27;89(1):132-139.

8. Li G, He L, Huang J, et al. miR-142-3p encapsulated in T lymphocyte-derived tissue small extracellular vesicles induces Treg function defect and thyrocyte destruction in Hashimoto's thyroiditis. BMC Med. 2023;21(1):206. 10.1186/s12916-023-02944-4.
9. Luo J, Zhou L, Sun A, Min Y, Lin Y, Han L. Clinical comparative efficacy and therapeutic strategies for the Hashimoto's thyroiditis:A systematic review and network meta-analysis. Heliyon. 2024;1016:e35114. 10.1016/j.heliyon.2024.e35114.
10. Williams DE, Le SN, Godlewska M, Hoke DE, Buckle AM. Thyroid Peroxidase as an Autoantigen in Hashimoto's Disease: Structure, Function, and Antigenicity. HormMetab Res. 2018 Dec;50(12):908-921.
11. Avramidou E, Gkantaras A, Dermitzakis I, Sapalidis K, Manthou ME, Theotokis P. Histological Alterations in Hashimoto's Disease: A Case-Series Ultrastructural Study. Medicines (Basel). 2023 Sep 02;10(9)
12. Lee JH, Kim Y, Choi JW, Kim YS. The association between papillary thyroid carcinoma and histologically proven Hashimoto's thyroiditis: a meta-analysis. Eur J Endocrinol. 2013 Mar;168(3):343-9.
13. Li J, Huang Q, Sun S, Zhou K, Wang X, Pan K, Zhang Y, Wang Y, Han Q, Si C, Li S, Fan S, Li D. Thyroid antibodies in Hashimoto's thyroiditis patients are positively associated with inflammation and multiple symptoms. Sci Rep. 2024 Nov 13;14(1):27902.Robbins & Cotran, Pathologic Basis of Disease 10th Edition.