(International Print/Online Journal)

SJIF IMPACT FACTOR: 6.829
PUBMED-National Library of Medicine ID-101739732

ISSN (Print): 2209-2870
ISSN (Online): 2209-2862

International Journal of Medical Science and Current Research (IJMSCR)
Available online at: www.ijmscr.com
Volume 9, Issue 3, Page No: 265-269
May-June 2026

IJMSCR

Emerging Autoimmune Thyroiditis Presenting as Acute Midline Neck Swelling with Reactive Lymphadenopathy in a Child: A Rare Pediatric Case

Meghraj Dave , Rajesh Rai, Saylee Jagtap, Ankitha Ponathil, Vidhi Rai
Department Of Paediatrics,
Dr. D Y Patil Medical College & Hospital, Navi Mumbai, Maharashtra, India, 400706

***Corresponding Author:**
Dr. Meghraj Dave
Department Of Paediatrics, Dr. D Y Patil Medical College & Hospital,
Navi Mumbai, Maharashtra, India, 400706

Type of Publication: Case Report
Conflicts of Interest: Nil

Abstract

Background

Autoimmune thyroiditis (AIT), commonly referred to as Hashimoto thyroiditis, is the most common cause of acquired hypothyroidism in children and adolescents. The disease usually presents with a painless diffuse goiter and evolves gradually over months to years. Acute presentation with rapidly progressive neck swelling and associated lymphadenopathy is uncommon and may mimic infective or neoplastic conditions.

Case Presentation

We report a 7-year-old male child who presented with acute-onset midline neck swelling progressing over 5–6 days without fever, pain, dysphagia, respiratory distress, or constitutional symptoms. Examination revealed a diffuse, firm, non-tender thyroid swelling moving with deglutition, along with left cervical and bilateral inguinal lymphadenopathy. Thyroid function tests were within normal range, suggestive of euthyroid autoimmune thyroiditis. Ultrasonography demonstrated diffuse thyroid enlargement with heterogeneous echotexture and increased vascularity. Anti-thyroglobulin antibody levels were elevated while anti-thyroid peroxidase antibody levels remained within normal limits. Infective and malignant etiologies were considered unlikely based on clinical and laboratory findings. The patient was managed conservatively with endocrinology follow-up and serial thyroid function monitoring, however thyroid scan was not done as parents refused to give consent for the same

Conclusion

This case highlights an atypical early presentation of autoimmune thyroiditis in childhood with acute neck swelling, euthyroid status, isolated anti-thyroglobulin positivity, and reactive lymphadenopathy. Recognition of such unusual manifestations is important to avoid unnecessary invasive investigations and ensure appropriate long-term follow-up.

Keywords: Autoimmune thyroiditis, Hashimoto thyroiditis, pediatric thyroid disease, euthyroid goiter, lymphadenopathy, acute neck swelling

Introduction

Autoimmune thyroiditis (AIT), also known as Hashimoto thyroiditis or chronic lymphocytic thyroiditis, is an organ-specific autoimmune disorder characterized by lymphocytic infiltration and progressive destruction of thyroid follicles. It represents the most common cause of acquired hypothyroidism in children and adolescents in iodine-sufficient regions.

The disease demonstrates a female preponderance and is more frequently observed during late childhood and adolescence. Clinical manifestations vary

considerably, ranging from asymptomatic thyroid enlargement to overt hypothyroidism. The most common presentation is a painless diffuse goiter detected incidentally during routine examination or evaluation for growth retardation, obesity, poor school performance, or delayed puberty.

Diagnosis is traditionally based on clinical findings, thyroid function abnormalities, characteristic ultrasonographic features, and positivity for thyroid autoantibodies, particularly anti-thyroid peroxidase (anti-TPO) and anti-thyroglobulin antibodies (anti-Tg). However, early or evolving disease may present with normal thyroid function tests and isolated antibody positivity, creating diagnostic uncertainty.

Acute enlargement of the thyroid gland over a few days is unusual in autoimmune thyroiditis and often raises concern for infective thyroiditis, thyroglossal cyst, suppurative lymphadenitis, lymphoma, or thyroid malignancy. Associated generalized lymphadenopathy further complicates the clinical picture.

We report a rare pediatric case of emerging autoimmune thyroiditis presenting with rapidly progressive midline neck swelling and reactive lymphadenopathy in an otherwise clinically stable euthyroid child.

Case Report

A 7-year-old male child presented to the paediatric outpatient department with swelling in the anterior midline neck region for 5–6 days. The swelling had an insidious onset and gradually increased in size over the course of the illness.

There was no history of fever, throat pain, dysphagia, odynophagia, respiratory distress, voice change, neck trauma, weight loss, night sweats, decreased appetite, constipation, cold intolerance, fatigue, tremors, palpitations, or altered bowel habits. There was no previous history suggestive of thyroid dysfunction or autoimmune disease.

Birth history, developmental history, immunization status, and past medical history were unremarkable. There was no known family history of thyroid disease, autoimmune disorders, or malignancy.

Clinical Examination

The child was hemodynamically stable and afebrile. Anthropometric measurements were appropriate for age.

Local examination revealed a diffuse midline neck swelling measuring approximately 4 × 3 cm involving the anterior neck. The swelling moved with deglutition but not with protrusion of the tongue, suggestive of thyroid origin. The swelling was firm, smooth, non-tender, and not associated with overlying skin changes.

Multiple discrete left cervical lymph nodes and bilateral inguinal lymph nodes were palpable. The lymph nodes were mobile, non-tender, and not matted.

No hepatosplenomegaly, edema, tremors, ophthalmopathy, skin changes, or features of ypothyroidism/hyperthyroidism were noted.

Investigations

Hematological and Biochemical Evaluation

Routine blood investigations were within normal limits.

Thyroid Function Tests

Volume 9, Issue 3; May-June 2026; Page No 265-269

1. Free T3 (FT3): 3.28 pg/mL
2. Free T4 (FT4): 1.06 ng/dL (Reference range: 0.90–1.67 ng/dL)
3. Thyroid-stimulating hormone (TSH): 1.382 µIU/mL (Reference range: 0.60–4.84 µIU/mL)

The thyroid profile was suggestive of euthyroid status.

Thyroid Autoantibodies

1. Anti-thyroid peroxidase antibody (Anti-TPO): 0.42 IU/mL (within normal limits)
2. Anti-thyroglobulin antibody (Anti-Tg): 41.59 IU/mL (elevated)

Ultrasonography of Neck

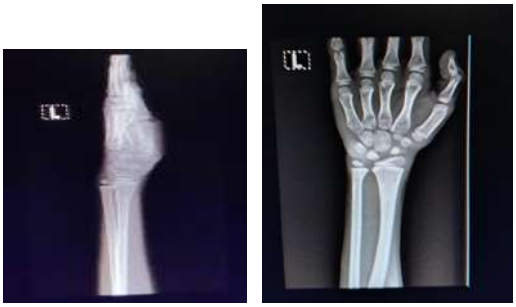
Ultrasonography demonstrated:

1. Diffuse enlargement of the thyroid gland
2. Right lobe: 1.7 × 1.0 × 3.3 cm
3. Left lobe: 1.5 × 1.1 × 2.5 cm
4. Heterogeneous thyroid echotexture
5. Mildly increased vascularity
6. No focal nodules or cystic lesions

These findings were suggestive of early autoimmune thyroiditis.

Bone Age Assessment

X-ray of the wrist revealed bone age corresponding to chronological age.



Differential Diagnosis

The differential diagnoses considered included:

1. Acute infective thyroiditis
2. Reactive cervical lymphadenitis
3. Thyroglossal duct cyst
4. Thyroid neoplasm
5. Lymphoma
6. Autoimmune thyroiditis

The absence of fever, tenderness, systemic toxicity, significant inflammatory markers, and focal abscess formation reduced the likelihood of infective thyroiditis. Lack of constitutional symptoms and benign ultrasonographic appearance made malignant pathology less likely.

Management and Follow-Up

The child was referred to pediatric endocrinology for further evaluation and management. In view of euthyroid status and absence of compressive symptoms, thyroid hormone replacement therapy was deferred.

The family was advised regular follow-up with:

1. Repeat thyroid function tests after 6–8 weeks
2. Serial ultrasonography every 6–12 months
3. Monitoring of growth parameters and pubertal progression
4. Clinical surveillance for development of hypothyroid symptoms

Discussion

Autoimmune thyroiditis is the most prevalent autoimmune endocrine disorder in the pediatric population. The disease commonly follows a chronic indolent course with gradual thyroid enlargement and eventual progression to hypothyroidism.

The present case is noteworthy due to several atypical clinical features.

First, the child presented with rapidly progressive neck swelling over less than one week. Such acute presentation is uncommon in autoimmune thyroiditis and can mimic acute bacterial thyroiditis or other inflammatory conditions. Pediatric thyroid swelling with sudden onset generally prompts evaluation for infection or malignancy, making recognition of atypical autoimmune thyroiditis clinically important.

Volume 9, Issue 3; May-June 2026; Page No 265-269

Second, the child was euthyroid at presentation. Many children with autoimmune thyroiditis initially remain biochemically euthyroid before progression to subclinical or overt hypothyroidism. Studies suggest that nearly one-third to one-half of pediatric patients may be euthyroid at diagnosis, particularly during early stages of disease.

Third, the patient demonstrated isolated elevation of anti-thyroglobulin antibodies with normal anti-TPO levels. Although anti-TPO antibodies are generally considered more sensitive markers of autoimmune thyroiditis, isolated anti-Tg positivity has been reported in early or evolving disease. This finding reinforces the importance of evaluating both antibody profiles in suspected pediatric autoimmune thyroiditis.

Another important aspect of this case was the presence of cervical and bilateral inguinal lymphadenopathy. Reactive lymphadenopathy may occur secondary to autoimmune activation; however, generalized lymph node enlargement often raises concern for hematological malignancy or systemic infection. Careful clinical assessment, absence of constitutional symptoms, and benign progression favored a reactive etiology in this patient.

Another important aspect is to highlight the fact that autoimmune thyroiditis is a condition with female predominance and here the child is a male child hence adds to the rarity of the condition.

Ultrasonography played a significant role in diagnosis. Diffuse gland enlargement with heterogeneous echotexture and increased vascularity are classical sonographic findings associated with autoimmune thyroiditis. Imaging also helped exclude focal lesions, abscesses, and congenital neck masses.

Management of euthyroid autoimmune thyroiditis remains individualized. Current pediatric endocrinology recommendations emphasize observation and periodic monitoring in asymptomatic euthyroid children. Levothyroxine therapy is generally reserved for overt hypothyroidism, significant goiter causing cosmetic or compressive symptoms, or progressive elevation of TSH.

Long-term follow-up remains essential because pediatric autoimmune thyroiditis may evolve over time. Patients are at risk of developing subclinical hypothyroidism, overt hypothyroidism, growth disturbances, pubertal delay, and rarely hyperthyroid phases known as hashitoxicosis.

Conclusion

This case highlights an uncommon presentation of autoimmune thyroiditis in a young child presenting with acute neck swelling and reactive lymphadenopathy despite normal thyroid function tests. Early recognition of atypical presentations is essential to prevent misdiagnosis, avoid unnecessary invasive procedures, and ensure timely endocrinological follow-up.

The coexistence of euthyroid status with isolated anti-thyroglobulin positivity underlines the evolving nature of pediatric autoimmune thyroiditis and emphasizes the importance of comprehensive antibody testing and serial monitoring.

Key Clinical Messages

1. Autoimmune thyroiditis may rarely present with acute neck swelling in children.
2. Pediatric autoimmune thyroiditis can be euthyroid at initial presentation.
3. Isolated anti-thyroglobulin antibody positivity may indicate early evolving disease.
4. Reactive lymphadenopathy may coexist and mimic infective or malignant conditions.
5. Ultrasonography is valuable for early diagnosis and exclusion of alternative etiologies.
6. Long-term endocrine follow-up is crucial due to risk of progression to hypothyroidism.

Patient Consent

Written informed consent was obtained from the patient's parents for publication of clinical details and images.

Ethical Approval

Institutional ethical approval was not required for a single case report as per institutional policy.

References

1. Brown RS. Autoimmune thyroiditis in childhood. J Clin Res Pediatr Endocrinol. 2013;5(Suppl 1):45–49.
2. Radetti G, Gottardi E, Bona G, et al. The natural history of euthyroid Hashimoto's thyroiditis in children. J Pediatr. 2006;149(6):827–832.
3. Pearce EN, Farwell AP, Braverman LE. Thyroiditis. N Engl J Med. 2003;348:2646–2655.

Volume 9, Issue 3; May-June 2026; Page No 265-269

4. Lazar L, Frumkin RB, Battat E, et al. Natural history of thyroid function tests over 5 years in a large pediatric cohort with autoimmune thyroiditis. Horm Res Paediatr. 2009;71(1):9–14.
5. De Luca F, Santucci S, Corica D, et al. Autoimmune thyroid diseases in children. J Thyroid Res. 2013;2013:675703.
6. Lee YJ, Jung SY, Jung HW, et al. Clinical characteristics of Hashimoto thyroiditis in children and adolescents. Ann Pediatr Endocrinol Metab. 2014;19(2):84–89.
7. Dayan CM, Daniels GH. Chronic autoimmune thyroiditis. N Engl J Med. 1996;335:99–107.
8. Wasniewska M, Corrias A, Salerno M, et al. Outcomes of children with Hashimoto thyroiditis. Horm Res Paediatr. 2012;77(6):376–381.

Volume 9, Issue 3; May-June 2026; Page No 265-269