

Tender neck in a diabetic patient

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ABSTRACT

A 45-year-old Indian patient with a history of type 2 diabetes mellitus presented with history of pain in the left side of the neck associated with sore throat of one month duration. The diagnosis of subacute granulomatous thyroiditis (de Quervain's thyroiditis) was made which was confirmed radiologically by depressed radioactive iodine uptake. The patient showed marked clinical response and improvement within 24 hours on anti-inflammatory drugs and corticosteroid.

Saudi Med J 2003; Vol. 24 (6): 675-676

Subacute granulomatous thyroiditis (De-Quervain's thyroiditis) is characterized by neck pain, a tender diffuse goiter, and hyperthyroidism followed by hypothyroidism and ultimately normal thyroid function. The diagnosis is confirmed by low radio iodine uptake or non visualization on scan.

Case Report. A 45-year-old Indian patient with a history of type 2 diabetes mellitus on oral hypoglycemic medications reported to the outpatient clinic with fever of one month duration and pain in the left side of the neck associated with a sore throat. He was examined by an otolaryngologist several times and received different types of antibiotics without improvement of symptoms; fever was persistently high up to 39°C. On physical examination patient had fever of 39°C, pulse 100 beats per minute, blood pressure 120/80 mm Hg. The thyroid gland was not palpable, and no obvious source of fever was found clinically. No thyrotoxic manifestations were observed. Laboratory investigations revealed neutrophil leukocytosis, high erythrocyte sedimentation rate 65 mm/hour, free thyroxin (FT₄) 5.7 ng/dL (normalized ratio (NR) 0.93-1.7 ng/dL), free triiodothyronine (FT₃) 8.0 pg/ml, thyrotropin (TSH) 0.009 microIU/mL (NR 0.27-4.2 microIU/mL). Computerized tomography (CT) scan of neck and nasopharynx revealed no thyroid abscess or nasopharyngeal suppuration and no

enlargement of any thyroid lobe. Then, the diagnosis of subacute granulomatous thyroiditis (de Quervain's thyroiditis) was made which was confirmed by depressed radioactive iodine uptake (RAIU) 0% percent uptake (**Figure 1**). He was started on anti-inflammatory drugs and corticosteroid. He showed marked clinical response and improvement within 24 hours. Follow-up thyroid function test and thyroid scans were normal in 6 months.

DISCUSSION. Subacute granulomatous thyroiditis (de Quervain's thyroiditis) is generally felt to have a viral etiology,¹ characterized by neck pain, a tender diffuse goiter, hyperthyroidism followed by hypothyroidism and ultimately normal thyroid function (**Figure 2**).² The diagnosis is usually obvious when the patient presents with a diffusely enlarged and very tender thyroid gland associated with elevated free T₄ levels, elevated sedimentation rate, low radio iodine uptake or non visualization on scan and, often some systemic symptoms.³ Treatment of patients with subacute thyroiditis should be directed at providing relief of the thyroid pain and tenderness by anti-inflammatory therapy either with non steroidal anti-inflammatory drug or corticosteroids. Corticosteroids are very effective in relieving symptoms of subacute thyroiditis; often within 24 hours.⁴ Treatment includes ameliorating symptoms

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Received 18th January 2003. Accepted for publication in final form 15th March 2003.

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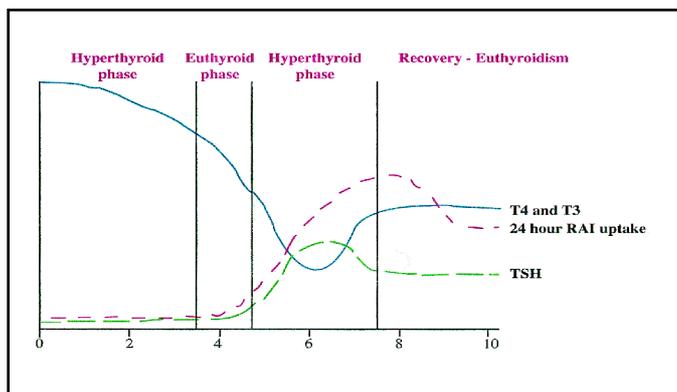


Figure 1 - Characteristic course of subacute thyroiditis. T₄ - thyroxin, T₃ - triiodothyronine, RAI - radioactive iodine, TSH - thyrotropin. X axis - months, Y axis - thyroid status.

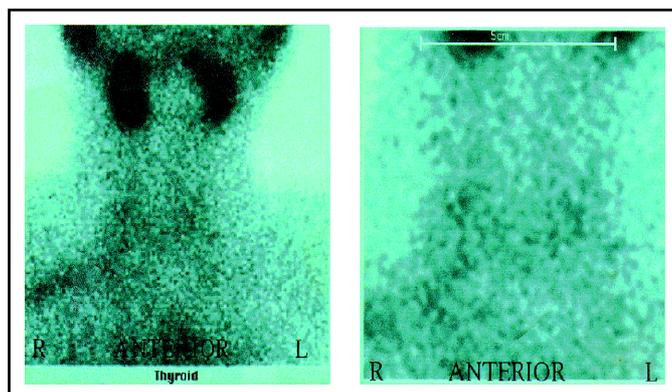


Figure 2 - Radioactive iodine showed zero percent uptake of subacute granulomatous thyroiditis (de Quervain's thyroiditis).

of hyperthyroidism, which often need no treatment, as their symptoms if present are mild or are subsiding at the time of presentation. Those few patients who have bothersome symptoms of hyperthyroidism, such as palpitation, anxiety, or tremor may benefit from treatment with a beta-blocker.⁵ The usual course of the disease is 4-8 weeks, after which patients have normal thyroid function with a normal thyroid gland scan.

Subacute thyroiditis is usually characterized by a moderately diffuse enlarged thyroid gland which later becomes tender.⁶ Both thyroid lobes are involved, and enlargement can be unilateral or start on one side and later spread to the other side several days later. However, in our case the pain was limited to one region of the thyroid gland⁷ and the throat which led the patient to consult an otolaryngologist with delay in the diagnosis especially without enlarged thyroid gland.⁸

Thyroid suppuration and nasopharynx abscess in a diabetic patient who had fever for one month were excluded by CT scan of the nasopharynx. When investigating fever of unknown origin subacute thyroiditis should be considered even if classic features are absent.^{9,10}

References

1. Slatosky J, Shipton B, Wahba H. Thyroiditis: differential diagnosis and management. *Am Fam Physician* 2000; 64: 1047-1052.
2. Nikolai TF, Coombs GJ, McKenzie AK. Lymphocytic thyroiditis with spontaneously resolving hyperthyroidism and subacute thyroiditis: Long-term follow-up. *Arch Intern Med* 1981; 141: 1455-1458.
3. Intenzo CM, Park CH, Kim SM, Capuzzi DM, Cohen SN, Green P. Clinical, laboratory, and scintigraphic manifestations of subacute and chronic thyroiditis. *Clin Nucl Med* 1993; 18: 302-306.
4. Lips P, Teule GJ, van der Linden JC, Gans RO. A painful inflammation of thyroid. *Ned Tijdschr Geneesk* 1998; 142: 1537-1542.
5. Yamamoto M, Saito S, Sakurada T. Effect of prednisolone and salicylate on serum thyroglobulin level in patient with subacute thyroiditis. *Clin Endocrinol* 1987; 27: 339-345.
6. Meier DA, Nagle CE. Differential diagnosis of a tender goiter. *J Nucl Med* 1996; 37: 1745-1747.
7. Sari O, Erbas B, Erbas T. Subacute thyroiditis in a single lobe. *Clin Nucl Med* 2001; 26: 400-401.
8. Houghton DJ, Gray HW, MacKenzie K. The tender neck: Thyroiditis or thyroid abscess. *Clin Endocrinol* 1998; 48: 521-524.
9. Weiss BM, Hepburn MJ, Mong DP. Subacute thyroiditis manifesting as fever of unknown origin. *South Med J* 2000; 93: 926-929.
10. Lazarus JH. Silent thyroiditis and subacute thyroiditis. In: Braverman LE, Utiger RD editors. *A Fundamental and Clinical Text*. 7th ed. Philadelphia (PA): Lippincott-Raven; 1996. p. 577.