

Subacute (de Quervain's) thyroiditis

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Subacute (de Quervain's) thyroiditis is a seasonal disorder that generally affects middle-aged women. It is characterized by neck pain and generalized malaise, fatigue, fever, and chills following an upper respiratory infection, usually of viral etiology. Thyroid gland palpation elicits exquisite tenderness of the firm gland, which can be involved either focally or diffusely. The stage of the disease determines whether there is hyper- or hypothyroidism.

Fine-needle aspiration specimens contain acute inflammatory cells in a background of mixed inflammatory cells and multinucleated giant cells with degenerated thyroid follicular epithelial cells. The thyroid gland displays ill-defined nodules made up of fibrous tissue, damaged thyroid follicular epithelial cells (eosinophilic cytoplasm with round, hyperchromatic nuclei), and extravasation of colloid (figure 1). The inflammatory process has a distinctly granulomatous pattern, characterized by the presence of foreign-body-type giant cells (multiple irregularly shaped nuclei in abundant cytoplasm) (figure 2, A), chronic inflammatory cells (mature lymphocytes and plasma cells), and microabscess formation (figure 2, B); the latter is made up of acute inflammatory cells (neutrophils with three or four lobes to the nuclei surrounded by granular cytoplasm). As the disease progresses, a variable degree of fibrosis and regeneration of the follicular epithelium becomes evident.

The histologic differential diagnosis includes palpation thyroiditis (histiocytes, lymphocytes, and no neutrophils), lymphocytic thyroiditis (oxyphilic [Hürthle, oncocytic] follicular epithelial cell metaplasia with mature lymphocytes and plasma cells arranged around germinal centers), and Riedel's thyroiditis (vasculitis and fibrosis).

Corticosteroid therapy usually results in symptom resolution in 4 to 6 weeks. Salicylates and other nonsteroidal anti-inflammatory medications have also been effective. Surgery is generally not indicated.

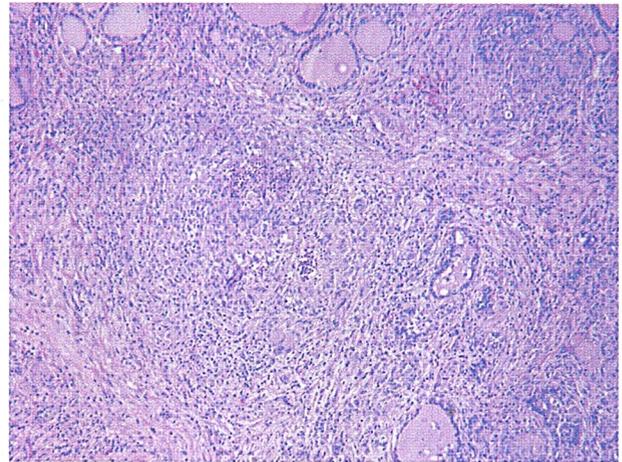


Figure 1. Intermediate-power microscopy shows the eosinophilic colloid-filled follicles at the periphery. In many follicles in the center, the epithelium has been replaced by the inflammatory reaction and the colloid is reduced or absent. Microabscess formation with foreign-body-type giant cells can be seen.

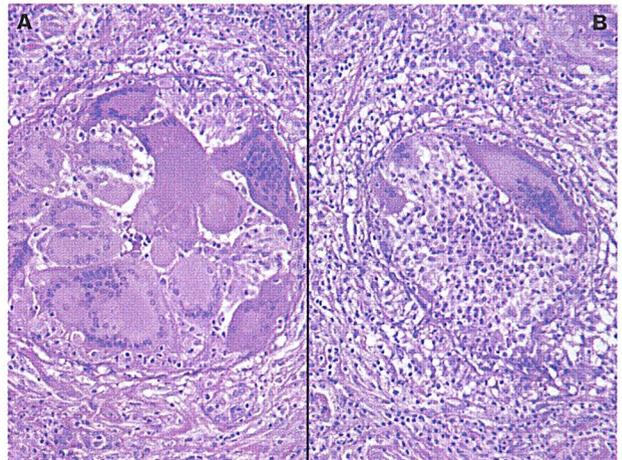


Figure 2. A: The colloid is engulfed by the ring of foreign-body-type giant cells with associated fibrosis. B: A microabscess is made up of neutrophils in association with foreign-body-type giant cells.

Suggested reading

Kitchener MI, Chapman IM. Subacute thyroiditis: A review of 105 cases. *Clin Nucl Med* 1989;14:439-42.

Singer PA. Thyroiditis. Acute, subacute, and chronic. *Med Clin North Am* 1991;75:61-77.