

# A child with acute suppurative thyroiditis

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## Introduction

Acute suppurative thyroiditis is a rare inflammatory disease caused by bacterial, fungal or rarely parasitic infection of the thyroid gland. Of 224 reported cases of thyroid infection 153 were bacterial, 33 were fungal and 11 were parasitic<sup>1</sup>. The rarity of thyroid infection has been attributed to the unique anatomic isolation of the gland and its rich system of drainage for blood and lymph<sup>2</sup>.

## Case Report

A previously healthy 7 year old boy was admitted to the Lady Ridgeway Hospital in July, 1999 with high fever accompanied by chills and rigors of 1 week duration, vomiting of 1 day duration and the appearance of a lump on the anterior aspect of the neck of 1 day duration. One week prior to the onset of fever, the child had an upper respiratory tract infection.

On examination, the child was febrile and ill-looking with no significant lymphadenopathy and no hepatosplenomegaly. Examination of the neck revealed a red, firm, tender lump (2.5 cm x 2.5 cm) with regular margins, not attached to the skin and moving with deglutition.

The total white cell count was  $12 \times 10^9/L$  (N 72%, L 26%, E 2%). A lateral x-ray of the neck showed an anterior soft tissue swelling. An ultrasound scan of the neck showed that the left lobe of the thyroid gland was enlarged and hypo-echogenic with multiple cystic areas ranging in diameter from 0.5 cm to 1.5 cm. The right lobe of the thyroid gland was normal in size and echogenicity. A tentative diagnosis of acute suppurative thyroiditis was made and the child was started on intravenous ampicillin, cloxacillin and metronidazole. After one week of therapy the lump became fluctuant and the child was referred to the paediatric surgeon for incision and drainage. More than 15 ml of thick purulent pus was removed from the gland and sent for bacteriology. The gram-stain showed gram positive cocci and gram negative bacilli. The culture showed a mixed growth of *Klebsiella* and non group A streptococci. Serum thyroxine (T4), triiodothyronine (T3) and thyroid stimulating hormone (TSH) levels were normal.

## Discussion

Acute bacterial thyroiditis may occur in patients of any age and is slightly more common in women than in men. The thyroid infection is often preceded by infection elsewhere in the body, usually an upper respiratory tract infection, pharyngitis or infections of the head and neck<sup>3</sup>. Clinical manifestations include pain in the anterior part of the neck (100%), tenderness (94%), fever (92%) and dysphagia (91%)<sup>2</sup>. Other than the neutrophil leucocytosis, laboratory data, including thyroid function tests, are usually normal. The most frequent bacterial isolates include *S. aureus*, *S. pneumoniae* and *Enterobacter* species<sup>2</sup>. Fine needle aspiration may aid in the diagnosis. Ultrasonography may be useful in excluding the possibility of a cervical abscess outside the thyroid capsule<sup>4</sup>.

The treatment of acute bacterial thyroiditis consists of rest, local heat and antibiotics. Occasionally, an abscess develops in the substance of the gland. If an abscess occurs as a complication, surgical drainage should be performed<sup>2</sup>.

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