Thyroid abscess: an unusual case secondary to biliary sepsis

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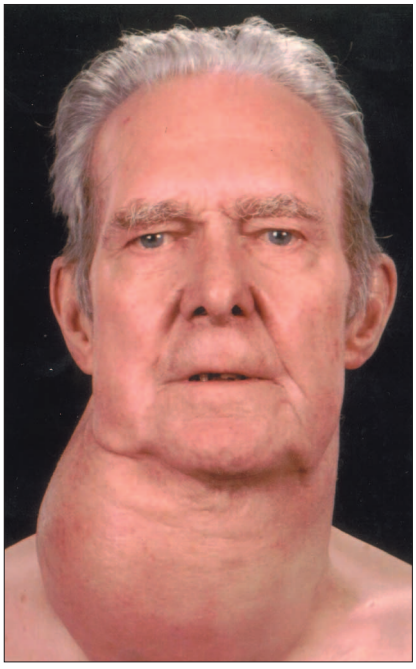

Figure 1. Erythema overlying the longstanding goitre.

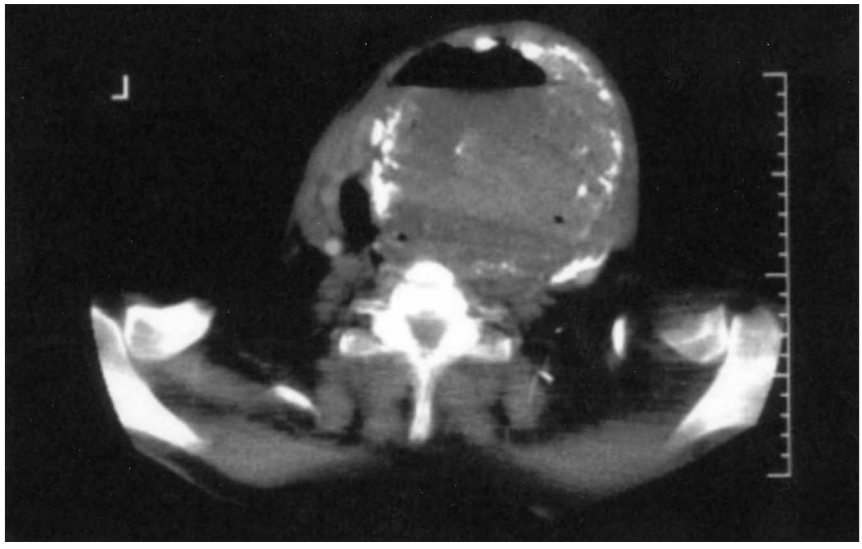

Figure 2. Computed tomography scan of the neck showing air fluid level within the thyroid gland.

INTRODUCTION

Thyroid abscess is a rare condition commonly caused by *Staphylococcus* and *Streptococcus* bacteria. Pre-existing thyroid disease or immunosuppression may predispose to this condition. This article discusses an 82-year-old man who was admitted with acute cholecystitis, which eventually led to the infection of a long-standing large goitre.

CASE REPORT

An 82-year-old man was admitted to the surgical ward as an emergency with clinical features suggestive of acute cholecystitis. At the time of admission, his temperature was 37.1°C. Laboratory tests showed a white cell count (WCC) of 11.6 x 10^9/litre, a C-reactive protein (CRP) of 14 mg/litre and altered liver functions (bilirubin 25 μmol/litre, alkaline phosphatase 336 iu/litre). The rest of the haematological and biochemical investigations were normal. He had a coexisting goitre that had been present for over 60 years. He was clinically and biochemically euthyroid with a free thyroxine of 17.1 pmol/litre and a thyroid-stimulating hormone of 0.27 mU/litre. Ultrasound scan of the abdomen showed calculous cholecystitis, and the rest of the scan showed nothing else of significance. The patient was started on broad-spectrum antibiotics.

His condition deteriorated in the next 48–72 hours with features of systemic sepsis. Abdominal examination did not show any evidence of clinical deterioration. At about the same time he was noted to have erythema and tenderness over his goitre with a slight increase in size (*Figure 1*). There was no evidence of any pressure symptoms. The inflammatory markers started to rise (WCC = 16.2 x 10^9/litre, CRP = 108 mg/litre). Blood culture was performed after the initiation of antibiotic therapy, and was found to be negative. Because of the large size of the goitre and clinical evidence of retrosternal extension a computed tomography scan of the neck was done rather than an ultrasound scan (*Figure 2*). Abscess of the thyroid was suspected and an attempt was made to aspirate, but this had to be abandoned as the pus was very thick. The thyroid was explored through a classical transverse incision and its capsule incised. A large quantity of pus and degenerative thyroid tissue was removed, and a corrugated rubber drain was left in place for drainage. The culture of the thyroid contents grew *Klebsiella*, sensitive to third generation cephalosporins. The patient was placed on cefuroxime for 7 more days, following which he made a gradual and uncomplicated postoperative recovery (*Figure 3*).

DISCUSSION

Thyroid abscess is a rare condition. It is commonly caused by streptococci, staphylococci or *Haemophilus influenzae*, although *Salmonella enteritidis* is also a well-documented association (Yu et al, 1998; Chrobok et al, 2000). It can involve any age group and the sex incidence is equal (Yu et al, 1998). The source of infection can be from the adjacent structures, as a result of pathogens entering from outside by direct trauma or haematogenous (Maini et al, 2001). Two important factors for

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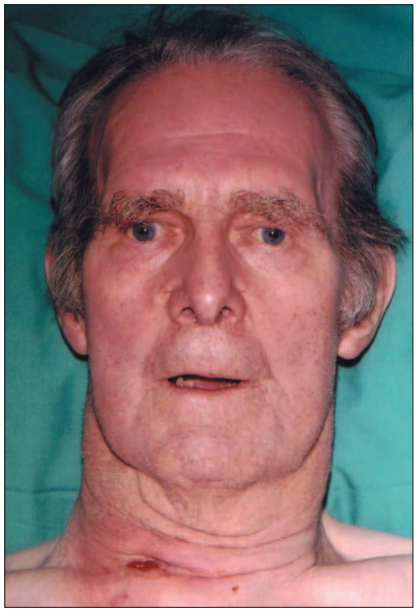

Figure 3. Patient post exploration of thyroid abscess.

the development of thyroid infection are pre-existing thyroid disease and immunocompromised states (Singer, 1991).

The treatment of suppurative thyroiditis involves antibiotics with repeated aspiration, incision and drainage, or excision of the involved gland (Yu et al, 1998). In this patient, aspiration was unsuccessful and large amounts of pus and degenerative thyroid tissue was removed after incising the thyroid capsule. The culture of the abscess grew *Klebsiella*, which is extremely uncommon in patients with thyroid abscess. The spread of infection has been suggested as being via the blood, the primary focus being the biliary system.

CONCLUSIONS

In patients with ongoing sepsis not responding to conventional methods of treatment, rare pockets of infection, such as within the thyroid as in this report, should not be forgotten. HM

Chrobok V, Celakovsky P, Nunez-Fernandez D, Simakova E (2000) Acute purulent thyroiditis with retropharyngeal and retrotracheal abscesses. *J Laryngol Otol* **144:** 151–3

Maini S, Brown MJ, Ali O, Davies S, Al Shafi KM (2001) Acute tonsillitis complicated by retropharyngeal and thyroid abscess infected with de-repressed beta lactamase *Citrobacter mutans*. *J Laryngol Otol* **155:** 327–9

Singer PA (1991) Thyroiditis. Acute, subacute, and chronic. *Med Clin North Am* **75:** 61–77

Yu EH, Ko WC, Chuang YC, Wu TJ (1998) Suppurative *Acinetobacter baumanii* thyroiditis with bacteremic pneumonia: case report and review. *Clin Infect Dis* **27:** 1286–90

IN THE PUBLIC'S VIEW...

Should the NHS fund infertility treatment?

NICE investigated treatments for infertility at the special behest of Alan Milburn. (Some of you may remember that Alan Milburn, MP, used to be Secretary of State for Health.) Of all the questions in health care that need answers about best treatments, some might say infertility should not rank highly – especially as they are not generally available on the NHS. On the other hand, the very fact that these treatments are only available in the private sector makes it more likely that, despite the special regulation of the clinics, couples are not getting the best available treatments.

NICE has now pronounced. The media ignored the dry prose of the 280 pages of the full document, picking up instead on the couple of paragraphs recommending that the NHS should start picking up the tab. In the words of the shorter, 44-page, document (all documents are available on the NICE website): 'local health communities… should review their existing practices… as they develop their Local Delivery Plan… implement as rapidly as possible'. NICE's work is not yet over. The guidance is only a draft out for consultation; the definitive guidance is due for publication in February 2004.

NICE was set up to give unified advice to doctors and others about best techniques and treatments. Some saw it as the rationing arm of the Department of Health, but its pronouncements on, among other things, cancer chemotherapy have silenced those critics, and NICE has cost the NHS a lot of money. But no one thinks that cancer shouldn't be treated. In its guidance on infertility NICE has taken an awkward step. I can see why it did. NICE was set up explicitly to end the 'postcode lottery'. The story of one couple getting their bundle of joy, but another not doing so just because they live in the wrong place, is irresistible.

However, of all the arguments in health-care provision, postcode prescribing is the most dishonestly argued. So long as there isn't enough for everything for everyone, some things that are possible cannot be provided. Ending the postcode lottery means starting a disease lottery. Is that more fair? And, at a time when thankfully and belatedly the Department of Health is reducing central control by back-tracking on its infamous targets, telling the primary care trusts that they must fund infertility is reimposing control.

It won't get any less expensive. At the moment, some forms of infertility cannot be treated. We have to allow for the exaggeration of scientists looking for more grant money, but the implication of the *Guardian*'s headline (25 July) 'End of infertility within a decade, say doctors' is that more complex, but successful, treatments will become available. NICE, in its guidance, specifically did not consider 'social issues related to fertility treatment (including social eligibility criteria)'. Those should always be outside its remit but, once the NHS has to fund infertility treatment, to be just it will have to fund any treatments that are (in the view of NICE) effective.

Meanwhile, we should not forget that at current success rates more couples will remain childless than will conceive even after the suggested three cycles of treatment. HM

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