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Peritonsillar haematoma

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Abstract
We present one patient who was admitted with a peritonsillar haematoma as a complication of acute tonsillitis and concomitant warfarin therapy for prosthetic aortic valves. While tonsillar haemorrhage as a result of acute tonsillitis has been well described, no cases of isolated haematoma formation have been documented, nor has it been recognized previously as a complication of long-term anticoagulant therapy. We discuss establishing the diagnosis, the likely aetiology and implications of this complication.

Key words: Tonsillitis; Haematoma; Warfarin

Case report

A 26-year-old male was admitted to the ENT department with pain on the right side of his throat radiating to his right ear and associated difficulty swallowing. He had had tonsillitis for one week prior to his admission and had been taking co-amoxiclav as treatment for this. He had no history of recurrent sore throats. Aortic valve replacement for a congenital valvular abnormality had been carried out five years previously and he had been on warfarin therapy since. He had also been an iv drug abuser although he had

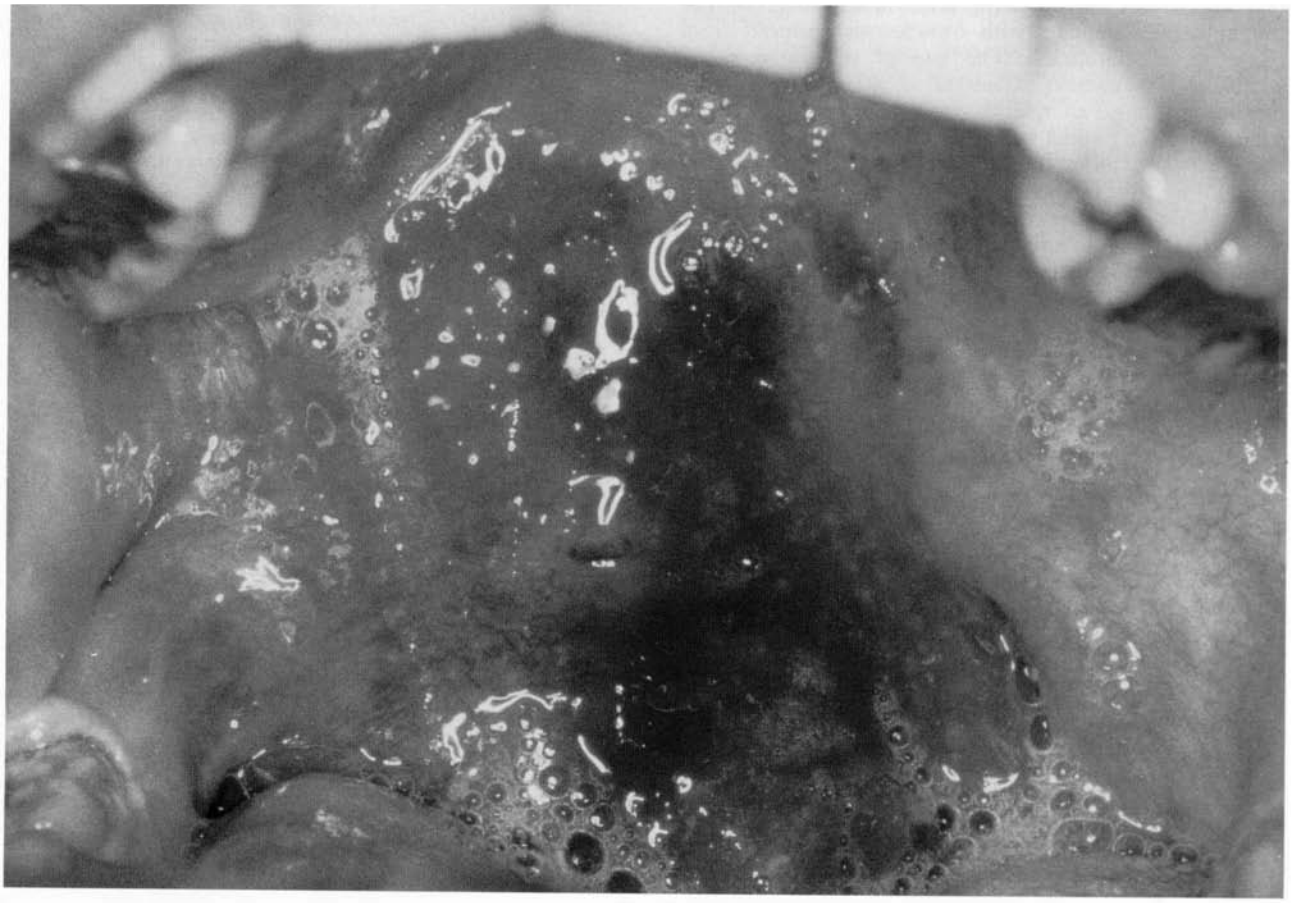

FIG. 1
Right peritonsillar haemorrhagic swelling.

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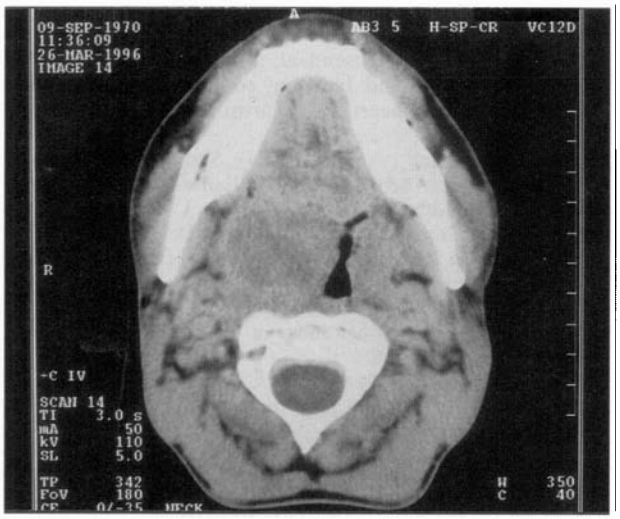

FIG. 2
CT scan of parapharyngeal swelling.

suffered no systemic complications from this, and was continuing to take methadone, a heroin substitute.

On admission he was found to be pyrexial at 37.4 °C. Examination demonstrated a haemorrhagic swelling of the right peritonsillar area and tonsillitis (Figure 1). There was no evidence of trismus and no airway compromise was apparent. His INR (International normalized ratio) was elevated above the therapeutic level at 4.5. Full blood count showed a slightly reduced haemoglobin at 12.1 g/dl with all other indices being within normal limits. Glandular fever screening test was negative. Lateral cervical spine X-rays did not show any abnormal soft tissue swelling. Aspiration of the peritonsillar swelling yielded only blood. The diagnosis of peritonsillar haematoma complicating warfarin therapy and acute tonsillitis was therefore confirmed.

He was managed conservatively with a combination of analgesics, iv. benzylpenicillin and metronidazole, and iv. fluids. A contrast enhanced computed tomography (CT)-scan performed the following day confirmed the presence of a residual parapharyngeal swelling (Figure 2). His warfarin was withheld until his INR was at the desired level. Over the following days his symptoms and signs gradually resolved (Figure 3) and he was discharged four days after his admission.

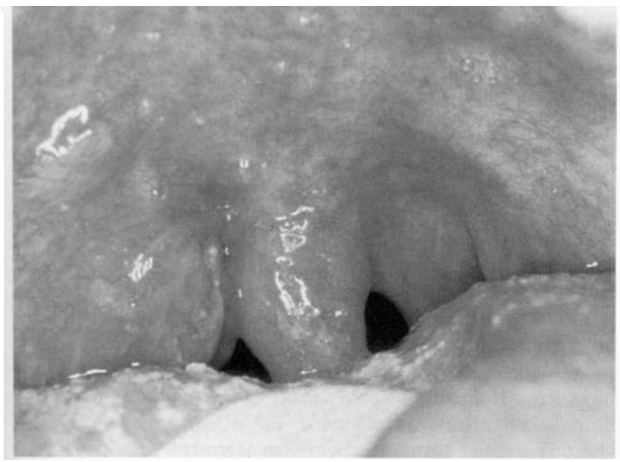

FIG. 3
Resolution of haematoma.

He was subsequently readmitted six weeks later with a further peritonsillar haematoma, on this occasion affecting the left side. He had again been treated for an episode of acute tonsillitis and had been commenced on cefaclor two days prior to admission. On admission his INR was 9.1. Human immunodeficiency virus (HIV) test proved to be negative. He was managed in a similar fashion and his condition gradually resolved allowing his discharge three days after admission.

Discussion

Haemorrhagic complications with warfarin therapy are common. The risk of these varies with the intensity of treatment, the length of therapy, the clinical circumstances of the individual patient and any associated drug interactions. Major bleeding complications are those that either resulted in the death of the patient or necessitated their admissions into hospital. The incidence of such complications in patients with prosthetic valves treated with oral anticoagulants is estimated overall to be 1.4 per cent/year. These figures are based upon results of 53647 patient-years of follow-up (Cannegieter *et al.*, 1994). Minor bleeding complications of therapy are more frequently reported, ranging from 1.2 per cent to 42.4 per cent (Levine *et al.*, 1995). The main factor influencing the frequency of bleeding, is the dose of anticoagulant, and therefore, the value of the INR. The recommended therapeutic range for our patient, was from 2.5–4.0. His tested value was 4.5 on first admission and 9.1 on the subsequent admission, despite his GP monitoring his INR every two weeks. These values may have been higher than expected because of a drug interaction. Many drugs can potentiate the effect of warfarin, and thus increase the risk of haemorrhagic complications. Our patient had been taking methadone, which, like codeine, is not thought to interact, and also co-amoxiclav and cefaclor. Broad spectrum antibiotics can vary the anticoagulant effect by altering the gut bacterial flora, and so altering the amount of vitamin K absorbed. Although not clinically proven to alter the anticoagulant effect of warfarin it appears to be common in clinical experience that broad-spectrum antibiotics such as co-amoxiclav may do so. Haemorrhage has been associated with some cephalosporins due to alteration in clotting factors and also as a result of enhancement of the anticoagulant effect of warfarin. This remains the likely reason for our patient presenting on each occasion.

The most common complication of tonsillitis is abscess formation in the peritonsillar region, but on reviewing the literature over the past 20 years we could find no previous reports of spontaneous peritonsillar haematoma. Tonsillar haemorrhage, however, is well recognized. The majority of these cases are in association with infectious mononucleosis, apparently occurring in three- to 6.9 per cent of cases (Skinner and Chui, 1987). Other viral illnesses have occasionally been implicated, and there has recently been an isolated report of tonsillar haemorrhage in a child with measles occurring during the coryzal illness and prior to the onset of the characteristic rash (John *et al.*, 1988). In the reports of spontaneous haemorrhage in association with acute bacterial tonsillitis, there was a total of seven patients (McCormack and Hasset, 1987; Skinner and Chui, 1987; Jawad and Blayney, 1994). Three underwent surgery because of continued or recurrent bleeding, and in one of these cases there was associated thrombus outside the capsule. Bleeding from the upper pole was the most commonly recognized site. In the patients where a bleeding point was identified, all except one were noted to be specifically bleeding from this area (four of five), the other being parenchymal. It is assumed that the bleeding

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resulted from inflammation and subsequent ulceration of the superior tonsillar vein (external palatine vein). This is the likely cause of the haematoma formation in the case described, with unarrested oozing due to the patient's high INR. Interestingly, only one patient from the seven above had any abnormality of their coagulation screen, and in that case, the bleeding time was only slightly above normal limits.

Characteristically, the populations of patients requiring long-term anticoagulant therapy, and those who develop tonsillitis, are different, which is why we believe this complication has not been previously reported. However, this case does emphasize the frequent side-effects anticoagulated patients experience, and the problems with potential drug interactions, especially in the presence of acute infection.

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