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Tuberculous parotitis: a case report

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Abstract
Tuberculosis of the parotid gland is rare. It cannot be distinguished from a parotid tumour by clinical examination alone, so surgical exploration has usually been required for diagnosis. We present a case with the same diagnostic dilemma.

Key words: Tuberculosis; Parotid diseases, surgery

Introduction

Recent years have seen a decline in the incidence of tuberculosis in Britain, although it remains relatively common in Asian population (Ubhi *et al.*, 1988).

Diffuse, infective parotitis is common, usually resulting from the mumps, echo or coxsackie A virus or Staphylococcus in the elderly and debilitated. Tuberculosis in the parotid region however is very uncommon, even in countries where the disease is otherwise rife. It nearly always presents as a localised mass, resulting from infection of intracapsular or periglandular lymph nodes. Diagnosis is therefore invariably made after operative excision of the presenting mass.

Parenchymatous tuberculosis affecting the entire gland is extremely rare. Only two cases are recorded in the salivary gland register of Germany for the period 1965-1981 (Seifert *et al.*, 1986) and one further case in the English literature in the last 10 years (Stanley *et al.*, 1983). In the patient reported here the condition was unassociated with a primary pulmonary focus.

Case report

A 57-year-old Asian gentleman, resident in UK for the last 20 years, presented with a swelling of the left parotid region of 10 years duration. The swelling had been increasing in size for four months. There was no history of pain, weight loss, night sweats or chest symptoms. Examination demonstrated a 1 × 1.5 cm, mobile, firm, non-tender swelling in the lower half of the left parotid gland. There was no facial nerve weakness. Examination of neck, mouth and pharynx was normal.

Investigations revealed a white cell count of 4.41×10^9/l and a lymphocyte count of 1.19×10^9/l. X-ray of the chest was normal. As the swelling was superficial and mobile, it was decided not to do computed tomography/magnetic resonance imaging (CT/MRI) presuming that it was in the superficial lobe only. Our initial diagnosis was pleomorphic adenoma and the left parotid region was explored with a view to performing superficial parotidectomy. Exploration revealed a mass extending into the deep lobe with no clear distinction between the tumour and the normal parotid gland and the facial nerve went through the mass. A frozen section was requested and a probable diagnosis of sarcoidosis reported. A biopsy specimen was taken and the operation was terminated.

Histo-pathology

Macro report: Salivary gland 5 × 2.5 × 2.3 cm. Serial slicing showed a fleshy infiltration and a small lymph node 1 cm in size.

Micro report: Both lymph node and salivary glands were almost completely replaced by typical sarcoid granulomata. However, one can never be sure and after a long search one acid fast bacillus (AFB) was found, confirming tuberculous parotitis.

The patient was referred to the physicians for further management.

Discussion

Mycobacterial parotitis is very uncommon. It was first described in 1894 by von Stubenrauch (Talmi *et al.*, 1990). Since then only 43 cases have been reported in the English literature and of these the majority were seen before 1941 (Coen, 1987; Ubhi *et al.*, 1988; Talmi *et al.*, 1990). Two pathological types occur, a common focal form resulting from lymph node infection and a rare diffuse form resulting from parenchymatous involvement. Of the 13 reported cases in the last 10 years, 12 are of the focal form (Levin-Epstein and Lucente, 1982; Burrow *et al.*, 1983; Stanley *et al.*, 1983; Coen, 1987; Ubhi *et al.*, 1988; Talmi *et al.*, 1990) and only one of the diffuse form (Stanley *et al.*, 1983). Before pasteurisation *Mycobacterium bovis* was the commonest organism but now it is *Mycobacterium tuberculosis*. In the localised form, resulting from infection of intra- or peri-glandular lymph nodes, the pathogenesis is probably similar to that for cervical node tuberculosis, thereby representing a primary focus. However, the origin may have arisen from an initial site in the tonsil (Wilmot *et al.*, 1957). The patient is often systemically well and the chest X-ray may be normal. In 75 per cent of cases there is no family or personal history of tuberculosis (Donohue and Bulder, 1961). The mass may frequently be mistaken

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for a parotid neoplasm, as in our case, resulting in unnecessary surgical exploration with the risk of subsequent fistula formation (Stanley *et al.*, 1983).

The second form, with diffuse involvement of the gland parenchyma, is extremely rare (Donohue and Bulder, 1961; Epker, 1972; Stanley *et al.*, 1983). In Stanley's case the patient developed a parotid abscess and histological examination revealed caseating granuloma of the periglandular nodes as well as the parenchyma. There was no evidence of active disease elsewhere and so it is probable that this case was of primary nodal disease with secondary spread to the surrounding gland. This seems to be the likely mechanism in our case.

The diagnosis is difficult given its extreme rarity and similar clinical picture to other forms of inflammatory parotitis. Inappropriate surgical exploration and delay in instituting correct treatment may result in gland destruction and fistula formation (Stanley *et al.*, 1983; Seifert *et al.*, 1986) or possible cross-infection from an open pulmonary focus.

In recent years, fine needle aspiration biopsy has become more acceptable as a means of diagnosing the pathology and nature of salivary gland masses without the complication of implantation (Lindberg and Ackerman, 1976; Ferrucci *et al.*, 1979). We did not perform fine needle aspiration cytology (FNAC) in our case, as we believed, that we were dealing with a simple case of pleomorphic adenoma of the parotid gland. Thinking retrospectively, FNAC would have probably helped us to avoid surgical exploration.

Conclusion

Tuberculosis of the parotid gland is rare. The diagnosis is difficult to make clinically and even at operation the tuberculous lesion is usually considered to be a tumour. In our view, the tuberculous parotitis should be considered a strong possibility in the Asian population who present with longstanding asymptomatic parotid lumps. FNAC can be used safely for diagnostic purposes. We recommend that all salivary gland lumps undergo FNAC prior to surgical exploration.

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