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Iatrogenic epidermoid cyst of the parotid region following ear surgery

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Abstract
Iatrogenic implantation of squamous epithelium may result in formation of an epidermoid cyst. These cysts have been described in various sites around the head and neck following otological procedures. A case of iatrogenic epidermal cyst in the parotid region following repeated myringoplasty is reported. The clinical features and differential diagnosis are discussed.

Introduction

Iatrogenic implantation of squamous epithelium may result in formation of an epidermoid cyst (Boyd, 1966; Gerlock, 1974).

Iatrogenic epidermoid cysts have been reported following various otological surgical procedures such as grommet insertion, stapedectomy and tympanoplasty (House, 1963; Armstrong, 1968). Epidermoid cysts have been found in the upper neck following ipsilateral radical mastoidectomy for cholesteatoma (Fliss *et al.*, 1989). Similar cysts have been described in the temporal region following myringoplasty and facial nerve decompression (Tovi *et al.*, 1985).

We present a further case of an iatrogenic epidermoid cyst in the preauricular parotid area following repeated endaural incisions to repair a perforated tympanic membrane.

Case report

A 30-year-old man presented with a three month history of a gradually enlarging mass in the left preauricular region overlying the parotid gland. Two weeks prior to presentation the mass had become tender and inflamed. His General Practitioner had diagnosed a parotid abscess and prescribed broad spectrum antibiotics with only limited clinical improvement.

Six months previously he had undergone ipsilateral myringoplasty for the third attempt at closure of a chronic perforation of the tympanic membrane. An endaural incision was used and temporalis fascia harvested via the same incision. The previous myringoplasties were performed three years and nine years ago and were also performed via an endaural incision with temporalis fascia harvested locally.

His past medical history included pneumococcal meningitis and idiopathic pericardial effusion. He was also an active homosexual and had undergone testing for HIV antibodies which proved negative.

On examination the mass was 3 × 2 cm in size and fluctuant. There was erythema and oedema of the overlying skin (Fig. 1). Facial nerve function was normal and no pus could be expressed from the parotid duct.

It was decided to excise this preauricular mass using a standard superficial parotidectomy approach. The findings were of an ovoid cystic mass containing cream coloured material with a thick cheese-like consistency. The wall of the cyst extended to the scar tissue of the previous endaural incision and was superficial to the facial nerve.

The mass was completely excised and submitted for histology. This confirmed the diagnosis of an epidermoid cyst lined by keratinizing squamous epithelium and full of keratinous debris. These appearances were consistent with an iatrogenic implantation epidermoid, alternatively known as an iatrogenic cholesteatoma (Fig. 2). There was no sign of recurrence six months after excision of the mass.

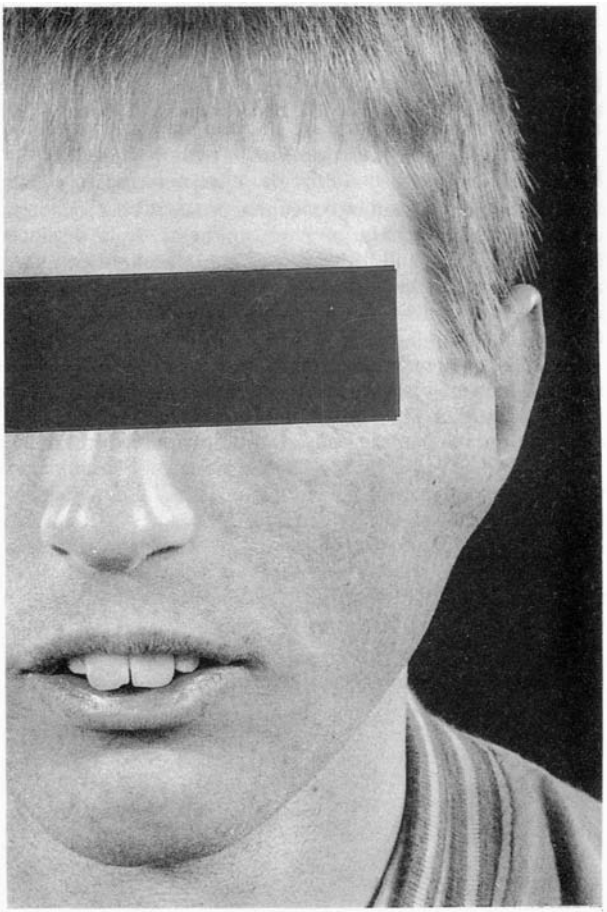

FIG. 1
Pereauricular mass.

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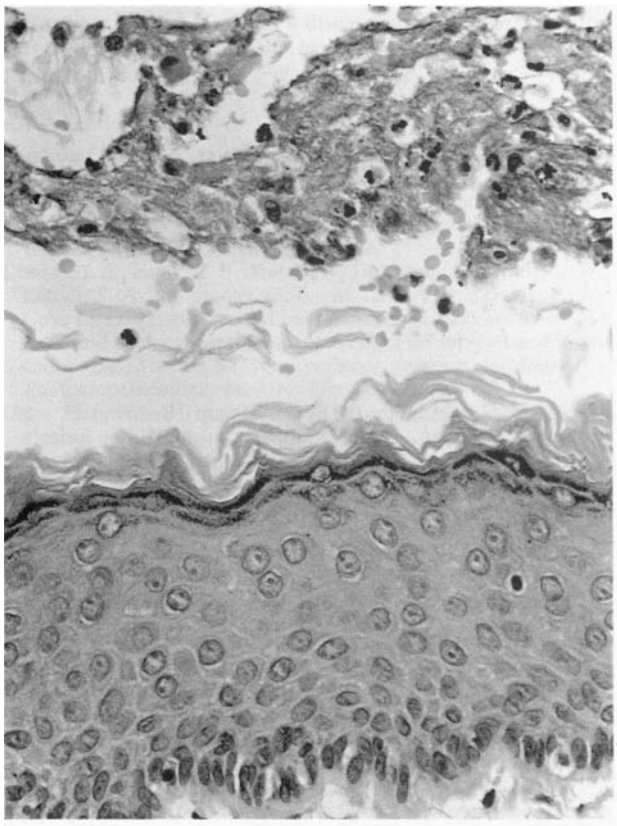

FIG. 2

Histology of cyst wall showing sheets of keratinized epithelium being shed into cyst cavity. Haematoxylin and eosin. ×300 magnification.

Discussion

Epidermoid cysts can be congenital or acquired. Congenital cysts are believed to arise from epithelial rests displaced between the third and fifth week of fetal development. They are thought to be the most common embryonal malformation and have a prediliction to occur in the head and neck region (Fliss *et al.*, 1989).

Acquired cysts result from implantation and encystment of a viable epidermal fragment. This tends to occur following trauma or surgery and has been described as occurring in several different parts of the body after biopsy procedures or surgery (Boyd, 1966; Gerlock, 1974). Although epidermoid cysts tend to be slow-growing, they may at times enlarge suddenly due to an increased amount of desquamated epithelium or a surrounding inflammatory soft tissue reaction.

Histologically, the cyst wall is composed of stratified squamous epithelium with the cystic space containing keratin and desquamated cells arranged mostly in layers.

Key words: Epidermoid cyst; Myringoplasty

The differential diagnosis of a soft cystic mass in the parotid region includes adenolymphoma (Warthin's tumour), cystic pleomorphic adenoma, sebaceous cyst, benign lymphoepithelial lesion, dental cyst, lipoma, lymphangioma, lymphoma and lymphangitis of a preauricular node.

A malignant tumour in this location would be suspected if there was induration on palpation of the mass, skin ulceration or palsy of the facial nerve. Malignant tumours of the parotid gland are more usually found in a much older group though mucoepidermoid tumours and adenocarcinoma have been reported in children (Byers *et al.*, 1984).

Cystic swelling of the parotid gland is a recognized manifestation of infection with human immunodeficiency virus (Sperling *et al.*, 1990). Although this patient was recently shown not to have HIV antibodies he belonged to a high-risk group and the possibility, at the time of presentation, that he may have been demonstrating a feature of Acquired Immune Deficiency Syndrome further complicated the management and diagnosis in this case (Youngs *et al.*, 1986).

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