Primary Parotid Hydatid Cyst: A Rare Cause of Parotid Swelling

The Editor,

Sir,

A 50-year old male was admitted to our hospital with a slowly progressive swelling in the left preauricular region lasting for eight months. On physical examination, a hard, immobile, painless mass was palpable in the left parotid gland region. He had no past medical, drug or surgical history. Facial nerve examination was normal. Ultrasonographic examination revealed a 5 × 3.5 cm cystic mass in the left parotid gland. Biochemical analysis revealed blood eosinophilia and high C-reactive protein (CRP) levels. Serologic tests detecting echinococcal antibodies were as follows: enzyme-linked immunosorbent assay IgG positive with a titre 1/320 and indirect haemagglutination positive with a titre 1/160. A fine needle aspiration biopsy was performed. The cytopathology of the aspirated fluid yielded no definitive diagnosis but real-time polymerase chain reaction of the fluid revealed low levels of positive *Echinococcus granulosus* DNA. Abdominal ultra-sound and computed tomography of the thorax revealed no cystic mass either in the liver or in the lungs. The cyst was removed with an intact wall keeping the healthy tissue around it. Macroscopic examination revealed 5 × 3.5 × 2.5 cm uniloculary cystic mass located in the superficial parotid lobe and containing a clear liquid in the lumen (Fig. 1).

Fig.1: Uniloculary cystic lesion with an intact wall and a contiguous healthy salivary gland tissue.

Microscopically, a hydatid cystic lesion with a fibrous connective tissue capsule that was surrounded by parotid gland was observed. The lumen of the cyst contained lamellar cuticular membranes, which were positive on periodic acid-Schiff, and hydatid scolices (Figs. 2 and 3).

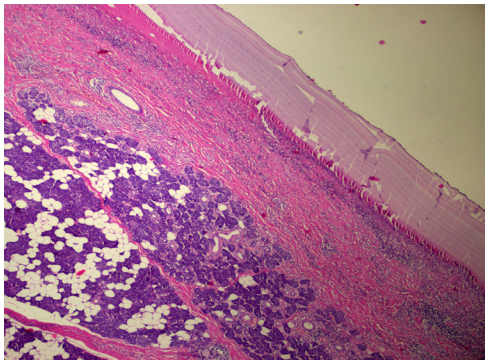

Fig. 2: Lamellar cuticular membranes surrounded by a fibrotic wall and intact parotid gland are observed (H&E × 200).

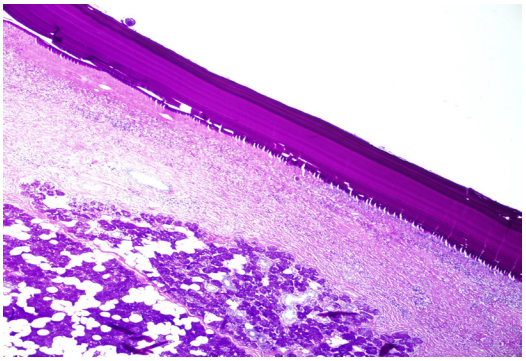

Fig. 3: Positive periodic acid-Schiff histochemical staining of the lameller cuticular membrane (PAS, × 200).

About two-thirds of human hydatid cysts are located in the liver and 5–15% in the lung. Rare body regions have been reported in the literature including mandible, orbits, nasopharangeal regions and infratemporal fossa (1–7). For the preoperative diagnosis of the hydatid disease, serologic and skin tests are used. But all these tests are associated with false negative and false positive results. The imaging techniques are not always possible to document the nature of the cyst except for the cases in which the presence of daughter cysts or water lily sign on magnetic resonance imaging are observed (3).

Surgery is still the main treatment for hydatid cyst. Removal of the cyst, fluid and germinative layer totally is the major advantage of surgery compared with other medical treatments. Silver nitrate (0.5%) or hypertonic saline solution (20%) can be injected to minimize the risk of spillage of the contents (2, 5, 7). Medical treatment with albendazole or mebandazole is necessary in cases of rupture of the cyst, multifocal hydatid disease or when the surgery is contraindicated. Although hydatid disease is extremely rare in the parotid gland, it must be kept in mind in the differential diagnosis of parotid swellings, especially in endemic regions. No primary focus of hydatid disease in the lungs, liver or other organs may be found, as in the present case.

Keywords: Cysts, echinococcosis, parotid gland

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