

# **Benign Mature cystic teratoma of parotid: A case report**

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## **Abstract**

We report one case of mature cystic teratoma that presented as a swelling in the right parotid gland region since childhood, increasing in size gradually. Teratomas are common neoplasm but are very rarely found in the parotid gland region.

## **Introduction**

Teratoma is a germ cell tumor derived from pluripotential stem cells and made up of elements of different types of tissues from one or more of the three germ cell layers. These tumors most commonly arise in the ovary or testis. Because of the relative rarity of teratomas occurring in the parotid region, we here report one case of mature cystic teratoma of the parotid gland with emphasis on the histopathological diagnosis.

## **Case report**

A 19 years-old Iraqi female presented to the oral and maxillofacial department in Al-Wasiti teaching hospital in Baghdad complaining from a swelling in the right parotid area since childhood, increasing in size gradually (Fig.1). Surgical intervention reveals cystic lesion in the superficial lobe of parotid gland with clear fluid content. An incisional biopsy was done, and biopsy specimen measuring  $3 \times 1.3 \times 1.3$  was sent to the histopathological department in the same hospital. Gross pathological analysis of the surgical specimen revealed a hard mass. Sectioning revealed white cut surface. Histopathological examination demonstrated the presence of keratinized stratified squamous epithelium of skin with hair follicles, numerous sebaceous glands, sweat glands, adipose and mature cartilage with two foci of immature cartilage, thus confirming the presence of a benign mature cystic teratoma (Fig. 2).



Figure (1): Clinical presentation of mature cystic teratoma of presented case

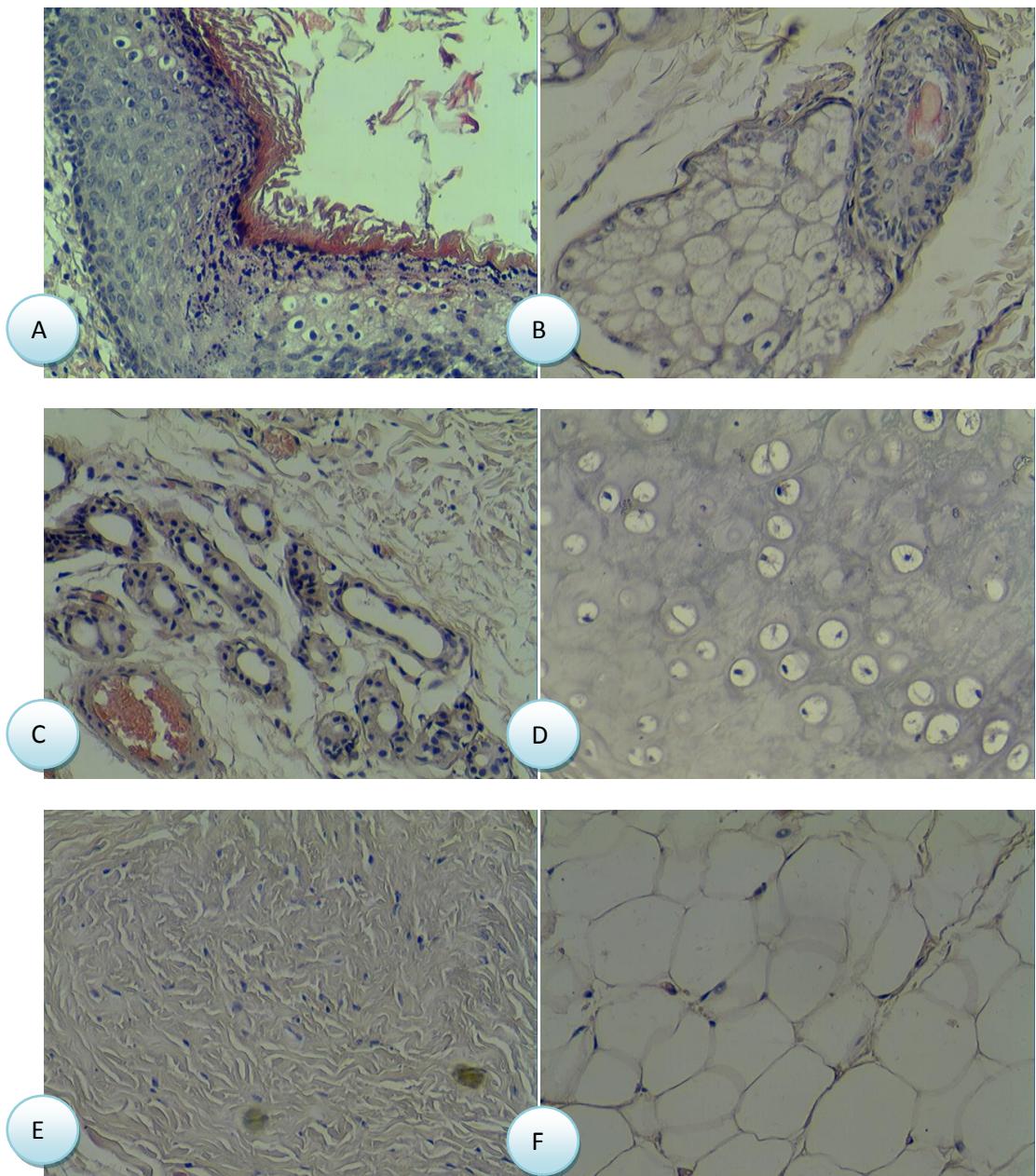


Figure (2): histopathological pictures of mature cystic teratoma (X200): A-keratinized stratified squamous epithelium of skin, B-Hair follicle and sebaceous gland, C- sweat glands, D-Mature cartilage, E-immature cartilage, and F-adipose tissue.

Parotid gland begin to develop at (4-6 weeks) of embryonic life, and continue to grow postnatally up to (2 years) of age. It arises as a proliferation of oral epithelial cells, forming a focal thickening that grows into the underlying ectomesenchyme. Parotid gland development requires interactions between the epithelium and mesenchyme. [Nanci, 2003]. This might explain the presence of ectomesenchmal components in benign cystic teratoma of parotid gland, as it was suggested that since every cell contains the full genetic code, theoretically any somatic cell, without being a "germ" cell, could produce any other type of cell. However, it allows an alternate theory of teratoma formation from ordinary somatic cells, rather than from pluripotent germ cells [Tapper and Lack, 1984], while others stated that teratomas originate from misplaced embryonic, pluripotent germ cells that lose influence during embryologic development. [Punch et al, 2007]. According to the Iraqi cancer registry 2004: Parotid glands tumors account for 0.21% of all tumors. 66.6% of salivary gland tumors originate in parotid. Benign mature cystic teratomas in the head and neck region are uncommon. However mature cystic teratomas of salivary gland are even rarer [Shao et al, 2009].

Cystic teratoma are graded microscopically as completely mature (grade 0), predominantly mature (grades 1 and 2), and mostly immature (grades 3 or malignant).

Areas with bone, cartilage, muscle, adipose tissue, and other mesenchymal elements admixed with epithelial elements are often present.

A wide variety of antigens are expressed by teratomas, including S-100 protein. [Barnes, 2009] Complete surgical resection is the treatment of choice for benign teratomas, and adjuvant chemotherapy is often used in malignant and metastatic cases. Recurrence is rare with complete resections. [Shao et al, 2009].

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