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CASUISTIC PAPER

Mahmoud M. Gharaibeh [1(ABCDEFG)], Ahmed Al Wadiya [2(DF)], Ahmad Gharaibeh [3(ACG)], Huda Hammad [4(D)]

Rare Benign cystic teratoma in the parotid gland

[1] Teaching Department of Dentistry, Princess Basma Teaching Hospital, Irbid, Jordan
[2] Royal Derby Hospital, United Kingdom
[3] Teaching Department of Orthopaedics and Musculoskeletal Trauma, Louis Pasteur University Hospital, LF UPJS Kosice, Slovakia
[4] Department of Oral Medicine and Oral Surgery, Jordan University of Science and Technology, Irbid, Jordan

ABSTRACT

Introduction. A teratoma is a tumor developed of several different types of tissue, like hair, muscle, teeth or bone.

Aim. Mature benign cystic teratomas are very rare in the salivary glands and just few cases were reported.

Description of the case. A 13 years old female was presented to our dental clinic of Princes Basma Hospital in Irbid in north of Jordan, with a painless, insidious progressive swelling in left parotid region without any significant family and personal history. Parents were cancer phobic and nervous from the condition of their daughter, they were very confused. There was no pain or any history of trauma. It was present just inferior to left ear cartilage. The mass was of size 3x3cm, non-tender, fixed, soft to firm in consistency, having smooth surface.

Conclusion. Teratoma in parotid region is an extremely rare entity. Lack of any pathognomonic feature, it is hard to diagnose preoperatively. Lumpectomy is advisable to remove the mass because the risk of damaging facial nerve in young patients and recurrence is rare. A definitive diagnosis is achieved after the histopathological study. Teratoma should be kept in account while evaluating a case of a soft tissue mass of parotid gland as a differential diagnosis.

Keywords. benign cystic teratoma, parotid gland, benign parotid tumours

Introduction

Parotid tumors are the most common type of salivary gland tumors over all, they are for 80 to 85 percent of all salivary gland tumors. While most parotid tumors are noncancerous (benign), the parotid glands are where about 25 percent of cancerous (malignant) salivary gland tumors develop.

The parotid glands, are seen just in front of the ears on each side of the face, are the largest of the three pairs of major salivary glands. They are responsible for producing serous saliva to aid in chewing and digesting food.

Parotid tumors present a variety of characteristics. In the case of a parotid tumor, we may notice a swol-

Corresponding author: Ahmad Gharaibeh, e-mail: gharaibeh@seznam.cz

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len mass in your jaw area that may or may not be painful. If the tumor suspected to be malignant, it may also affect facial nerves, causing pain, numbness, a burning or prickling sensation, and finally loss of movement in the face.

A teratoma is a tumor developed of several different types of tissue, like hair, muscle, teeth or bone. Typically they form in the ovaries, testicles, or tailbone and rarely in other areas.[1] Teratomas found in babies, children, and the adults. Teratomas of embryonic origin are most often found in new borns, in young children, and, since the advent of ultrasound imaging technique, in fetuses. Mature benign cystic teratomas are very rare in the salivary glands and just few cases were reported.[2]

Fine needle aspiration (FNA) cytology is an important procedure in the primary diagnosis and management of cystic parotid gland lesions even it is not reliable. The diagnostic accuracy of this procedure can be improved by establishing a detailed clinical history, obtaining an adequate cellular specimen, and having comprehensive knowledge of the variety and frequencies of possible diagnostic entities that may present as cystic parotid gland lesions.

Aim

Mature benign cystic teratomas are very rare in the salivary glands and just few cases were reported.

Description of the case

A 13 years old female was presented to our dental clinic of Princes Basma teaching Hospital in Irbid in north of Jordan, with a painless, insidious progressive swelling in left parotid region without any significant family and personal history. Parents were cancer-phobic and nervous from the condition of their daughter, they were very confused. There was no pain or any history of trauma (exist several pathological diseases with same symptoms). It was present just inferior to left ear cartilage. The mass was of size 3x3cm, non-tender, fixed, soft to firm in consistency, having smooth surface.

Fine needle aspiration cytology came out to be of cystic lesion. CT (computed tomography) of that area revealed a hypodense space occupying lesion of size 3x3cm, after hematological investigations, ECG, chest x ray, patient was prepared for surgery.

Post tragus Incision done to perform lumpectomy. The mass was well encapsulated without interfering the facial nerve. It was smoothly dissected except the upper part was attached to ear cartilage, so we needed to detach by scalpel and it was punctured, then yellow discharge was released. We removed small part of the surface of the ear cartilage (fig.1). The mass was sent to histopathology department in 10% formalin solution (fig.2). After one we week stiches were removed and she came after two weeks with the histopathology report,

Fig. 1. Operation view

Fig. 2. Biopsy in formalin

which final diagnosis was benign cystic teratoma (fig.3). Patient was doing well.

Histopathologic examination showed a cystic cavity lined by keratinized stratified squamous epithelium resembling epidermis. The fibrous connective tissue wall contains sebaceous glands, hair follicles, skeletal muscle, and foci of hyaline cartilage (fig.4.).

After one year patient came to our clinic without any problems or signs of recurrence and the wound is healed fine.

Fig. 3. Postoperative scar

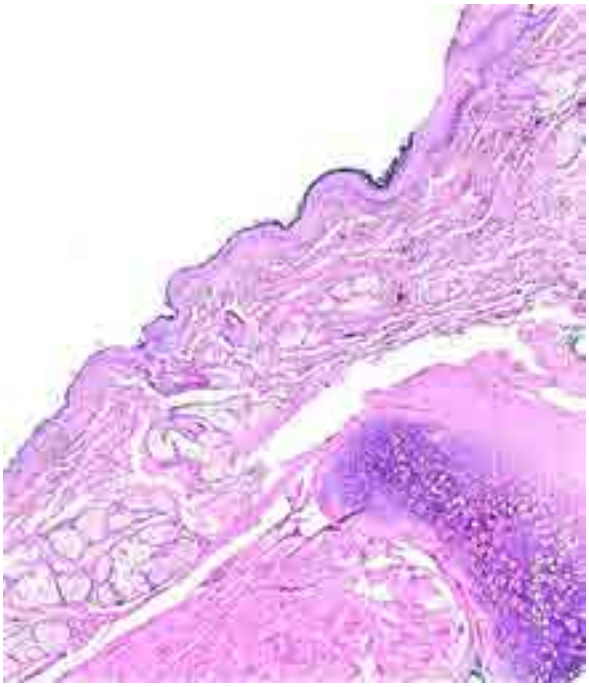

Fig. 4. H&E stain, original magnification X40

Discussion

Teratomas are part of a category of tumors known as nonseminomatous germ cell tumour. All tumors of this category are the sequel of abnormal development of pluripotent cells: germ cells and embryonal cells. Teratomas of embryonic origin are always congenital; teratomas of germ cell origin may or may not be congenital developed. The kind of pluripotent cell appears to be unimportant, apart from constraining the location of the teratoma in the entire body.

Teratomas derived from germ cells are found in the testes in men and ovaries in women. Teratomas derived from embryonic cells often occur in the midline of the brain, elsewhere in the skull, in the nose, in the tongue, under the tongue, and in the neck called (cervical teratoma), mediastinum, retroperitoneum, and attached to the coccyx. Teratomas may also occur elsewhere: very rarely in solid organs (most notably the liver) and hollow organs (such as the stomach, heart and bladder), and more commonly in the skull sutures. More rarely such as in brain matter, teeth or eyes.[3,4]

A mature cystic teratoma in parotid salivary gland was first described in 1975 by Shadid et al.[3]

Parotid is a common site for cysts which may be congenital or acquired. Congenital cysts can be branchial cleft cyst, branchial pouch cyst, congenital duct cyst or dermoid cyst.[5,6] Acquired cysts may be of traumatic, neoplastic, calculi or parasitic i.e. hydatid cyst. Cysts can occur at any part of parotid. CT is better than Ultrasound to define the teratoma extent, relation to the surrounding organs and in evaluate cystic wall. The recommended treatment for parotid teratomas is surgical excision and recurrence is rare.[6]

It is very difficult to diagnose teratoma before final excision and rare recurrence make planning for total parotidectomy is problematic and here the risk of facial nerve injury is higher. Lumpectomy is satisfied procedure to preserve facial nerve, but follow up is very important because of risk of malignant transformation.

Conclusion

Benign cystic teratoma is very rare in salivary glands. Surgical excision is for treatment and final diagnosis. In the parotid gland we must take into account high risk of facial nerve damage, so we prefer to make lumpectomy with periodic follow up.

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