

CASE REPORT

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Epidermoid Cyst of Mandible Ramus: Case Report

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ABSTRACT

Introduction: An epidermoid cyst is a benign cyst usually found on the skin. Bone cysts are very rare and if they appear in bone they usually appear in the distal phalanges of the fingers. Epidermoid cysts of the jaws are uncommon. **Case presentation:** We present a case, of a 41 year-old female patient admitted to our department because of pain and swelling in the parotid and masseteric region-left side. There was no trismus, pathological findings in skin, high body temperature level, infra-alveolar nerves anesthesia or lymphadenopathy present. The orthopantomography revealed a cystic lesion and a unilocular lesion that included mandibular ramus on the left side with 3 cm in diameter. Under total anesthesia, a cyst had been reached and was enucleated. Histopathologic findings showed that the pathologic lesion was an epidermoid cyst. **Discussion:** ISCUSSION: Epidermoid and dermoid cysts are rare, benign lesions found throughout the body. Only a few cases in literature describe an intraosseous epidermoid cyst. **Conclusion:** Our case is an epidermoid cyst with a rare location in the region of the mandibular ramus. It is not associated with any trauma in this region except medical history reveals there was an operative removal of a wisdom tooth 12 years ago in the same side. These cysts are interesting from the etiological point of view. They should be considered in the differential diagnosis of other radiolucent lesions of the jaws. Surgically they have a very good prognosis, and are non-aggressive lesions.

Key words: mandibular cyst, epidermoid cyst, dermoid cyst.

1. INTRODUCTION

An epidermoid cyst is a benign cyst usually found in the skin. The cyst develops out of ectodermal tissue. Epidermoid cyst represent the simplest expression of teratoma spectrum. Intraoral epidermoid cyst should not be confused with the more common epidermoid cyst of the skin, a nonteratomatous lesion that arises from the hair follicle. Intraorally, it is a benign slow growing and painless entity which is usually located in the submandibular, sublingual and submental region. Epidermoid cysts are rare lesions in the oral cavity (1). Intraosseous epidermoid inclusion cysts are rare benign bone lesions. If they appear in bone they usually appear in the skull and in the distal phalanges of the fingers.

Epidermoid cysts of the jaws are very rare. There are only few cases described in literature until now and

in few of them there is confusion between dermoid and epidermoid cyst (2). The difference is that dermoid cyst (compound type) is defined similarly as that of the epidermoid type but contains skin appendages such as hair follicles, sebaceous glands or sweat glands. Dermoid cysts are usually congenital, they may be found in the eyelid, peripheral cornea or orbit. Usually they appear in the superotemporal quadrant. Epidermoid cysts come from squamous epithelial cells that have penetrated deep into the dermis for example after skin surgery, trauma or congenital. The content of the cyst is mainly keratin as only the cysts do not contain dermal structures such as hair follicle or sebaceous glands. Histologically, the two differs in the structures found in the lining of the wall. From the surgery point of view there is no importance in their dif-



Figure 1. Extraoral view one month before surgery



Figure 2. OPG one month before surgery

ference, there is the same treatment. Both of them are very rare in bones, especially in jaws.

2. PRESENTATION OF CASE

A 41 year-old female patient was referred to the Department of Maxillofacial Surgery of the Clinical University Center of Kosovo. She was admitted to the hospital after one month, and treated in the outpatient ambulance due to pain and swelling in the parotid masseteric region of the left side. There was no trismus, no pathological findings in the skin, no high body temperature level, no infra-alveolar nerves anesthesia, no lymphadenopathy. Ultrasound results showed no pathological findings. Her medical history reveals an operative removal of a wisdom tooth 12 years ago in the same side. There were no systemic illness and non-infection diseases. She was a non-smoker. The orthopantomography was taken to see bone lesions, which revealed a cystic lesion, unilocular lesion that included a ramus of the lower jaw on the left side, 3 cm in diameter. Aspiration biopsy from cystic lesion was performed under local anesthesia, with the conclusion: "No atipic cells were found". Under total anesthesia, a cyst had been reached and was treated with a conservative marsupialization. The bone defect was filled with jodoform gauze, which was changed every week for 20 weeks. After the surgery the patient

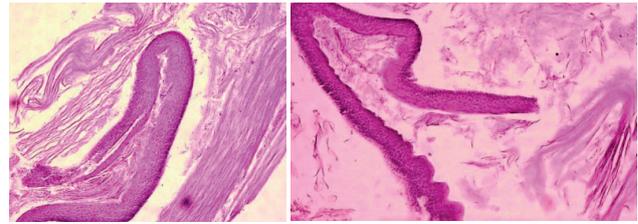


Figure 3. a),b): Microscopic pictures showing wall of the cyst lined with stratified squamous epithelial lining, in the lumen keratocystic production with lamellar lining (10x magnification).

was prescribed antibiotics, analgesic and chlorhexidine 0, 12% for mouthwash. The specimen was sent for histopathological examination which revealed the cyst lined with stratified squamous epithelial lining, in the lumen keratocystic production with lamellar lining (Hematoxylin and Eosin, 10x magnification), this confirmed that the lesion was an epidermoid cyst.

3. DISCUSSION

Epidermoid and dermoid cysts are rare, benign lesions found throughout the body, with 7% occurring in the head and neck area, 1.6% of which occur in the oral cavity (3). In the head and neck area they usually appear in the submental region. Only a few cases in literature describe intraosseous epidermoid cysts. According to an author, only 13 cases have been documented in literature, 7 in mandible and 6 in maxilla (4). Orbit is the most common location of epidermoid cyst at the head and neck (47%), followed by the mouth floor (23%) and the cervical area (9~24%), but in the jaw bone it is considered very infrequent (5).

Although clinical behavior of epidermoid cysts and keratocystic cysts is hard to distinguish, the characteristics features of histopathological elements of epidermoid cysts which distinguish them from keratocystic odontogenic cyst is laminated keratin in the cyst lined by stratified squamous epithelium, while keratocysts have keratinizing lining epithelium with corrugated parakeratin layer and satellite cysts in cystic capsule.

In literature we have found a few case reports that associate mandibular cysts with or after extraction of third mandibular molar (6). Also, only one case of bilateral epidermoid associated with impacted mandibular wisdom teeth (4). There is a case report that associates epidermoid cysts with a gunshot incident a few years earlier where a bullet had penetrated the soft tissues of the face and fractured the left mandibular ramus. The patient underwent surgery and healed uneventfully (7).

According to the literature, etiologic factors of epidermoid cysts are congenital, but there are reports from many authors that trauma was the possible cause of this lesion. These conclusions are based on the theory of traumatic implantation of cystic cells into deeper tissues, and this can be the major etiological factor for formation of intraosseous epidermoid cysts (8).

Author CEE Noffke (Dentomaxillofacial Radiology, 1999) has reviewed all documented cases of epidermoid implantation cysts affecting the oral tissues until the year 1999, and he was from the first authors that presented a

unique case of an epidermoid cyst involving the ramus of the mandible. According to his review, trauma always precipitate in the formation of the implantation-type epidermoid cyst, King preferred the term 'post traumatic cyst (7, 9).

4. CONCLUSION

Our case is a rare epidermoid cyst located in the mandibular ramus. These lesions should be considered in the differential diagnosis of radiolucent lesions of the jaws, therefore during examination we should consider aspiration biopsy, ultrasonography and other advanced imaging techniques since conventional radiographs are not enough for differential diagnosis of cystic similar bone lesions. Surgically they have a very good prognosis, they are non-aggressive lesions.

- Conflict of interest: none declared.
- Author's contribution: MPL was in charge of patient's care carried out the medical screening, interpretation of case report and together with ZA who is corresponding author, made substantial contribution's writing of the manuscript, SS and KK collaborated in writing the manuscript, SL performed histopathology investigations, ZA and VH made contributions to conception and the design of the study, AR was involved in patient review and investigation. All authors reviewed and approved the final manuscript.

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