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Fibromyxoma of the Maxilla - case report

Włókniakośluzak szczęki – opis przypadku

INTRODUCTION

According to the World Health Organization (WHO), odontogenic myxoma is classified as an odontogenic tumor of ectomesenchymal origin. It appears to originate from the dental papilla, follicle, or periodontal ligament [2,3]. Myxomas were first described by Thoma and Goldman in 1947 [4].

Odontogenic myxoma is a locally invasive lesion that does not metastasize and appears slowly. The radiographic features of odontogenic myxomas described in the literature are varied, ranging from small unilocular lesions to large multilocular tumors that often displace teeth or less frequently resorb roots of teeth. Borders may be well demarcated or ill defined. Radiographically, myxomas may present similar features of an ameloblastoma or a central giant cell granuloma.There are potential difficulties in reaching a proper diagnosis merely on radiographic studies. A biopsy is necessary to ascertain an accurate diagnosis [4,5].

Myxoma is found less commonly in the bone than in soft tissue. It is usually found in the heart, skin, subcutaneous tissue, and certain bones. The majority of bony myxomas occur in the jaws. When compared with other odontogenic tumors, myxoma of the jaw is a rare entity [5,6]. Odontogenic myxoma predominantly affects females at a mean age of 28 to 30 years, but the possible age range is wider. A slow-growing, painless swelling of the jaw is the typical presentation [2,5,6]. Lesions from both maxilla and mandible occur with equal frequency [1].

On gross examination, the tumor was composed of gray to white multinodular tissue that has a firm to gelatinous consistency. Microscopically, the tumor consisted of rounded, spindled, and stellate cells arranged in a loose, myxoid stroma with few collagen fibrils. Small islands of apparently inactive epithelial odontogenic rests may be scattered through the myxoid substance. There is a microscopic resemblance between odontogenic myxoma and dental papilla. Myxomas lack the epithelial lining found in many dental follicles [2]. When collagen fibrils are prominent, these tumors are often designated as myxofibromas, which are probably identical to what has previously been reported as the simple type of odontogenic fibroma [1,4,6].

Recommended therapy varies from curettage to radical excision. Complete surgical removal can be difficult as the lesion is not encapsulated and because the myxomatous tissue infiltrates adjacent bone tissue. These characteristics may explain the high rate of recurrence of myxomas, which ranges from 10 to 33% with an average of 25% [2]. A number of surgical procedures are advocated including enucleation and curettage, curettage with or without electrocautery, and en bloc resection. Due to the fact that this tumor has the potential for local invasion with a high rate of recurrence of 16% to 60% after conservative treatment, radical surgery including either wide resection or en bloc resection has been strongly recommended by some authors (6). Extensive surgery is sometimes followed by radiotherapy [2,4,5]. In differential diagnosis, other lesions like giant cell granuloma, Schwann cell tumor, well-differentiated myxoid liposarcoma, fibrous dysplasia, ameloblastoma, and central hemangioma of bone are considered [1].

C a s e p r e s e n t a t i o n. A 22-year old Caucasian woman, coming from the rural environment was admitted to the Oral Surgery Clinic of Lublin Medical University with a tumor in the maxilla. This lesion had been present for about 6 months, but the patient had not sought medical attention because enlargement of the tumor had been slow and painless. Physical examination revealed facial asymmetry and a swelling extending in the alveolar ridge in the region of 16th tooth. The tumor was painless, hard, immovable in relation to the base, covered with dense mucosa and without inflammatory features**.** Panoramic radiography showed unilocular radiolucency with a well-defined margin.

An incisional biopsy was made. The histopathologic examination showed fibromyxoma. A buccal mucoperiosteal flap was reflected extending from the maxillary tuberosity to the canine tooth in the left maxilla under general anesthesia. The tumor was totally removed using a transoral approach and partial excision of alveolar bone. Plate osteosynthesis and primary reconstruction of alveolar bone was done. An autogenous bone graft taken from the iliac crest bone was used. The osteosynthesis was performed with Compact 2.0 plate.

The remaining large oro-antral opening was covered using the vascularized mucosa buccal flap. The postoperative period was uneventful. The patient was followed monthly for the first six months following surgery and continues to be followed up yearly. After one year osteolisys of the bone graft was found and the osteosynthesis plates were removed. After five years patient was examined again.

The pantomographic x-ray and intraoral photos were taken. On the basis of the pantomographic x-ray photo the neoplasm recurrence was not found. Patient will be followed up yearly.

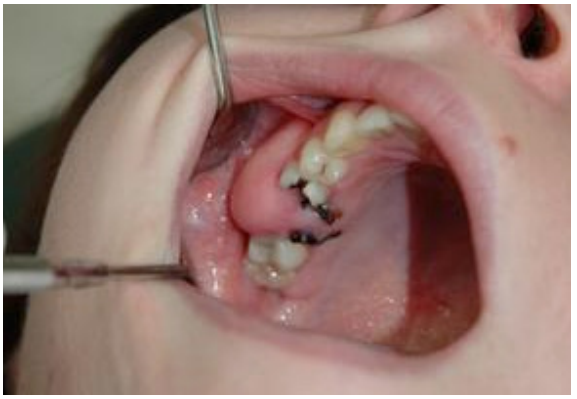

Figure 1. Tumor of the alveolar process of the maxilla

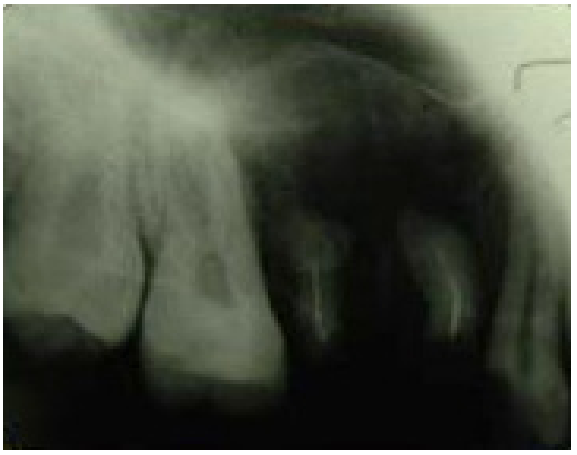

Figure 2. Preoperative orthopantomograph of the patient showing fine trabeculations within the lobular radiolucent tumor. Panoramic radiograph showing a unilocular radiolucent area in the upper first molar. Panoramic radiograph: tumor located in the area of the upper first molar. The border of the maxillary lesion in the molar area is poorly defined

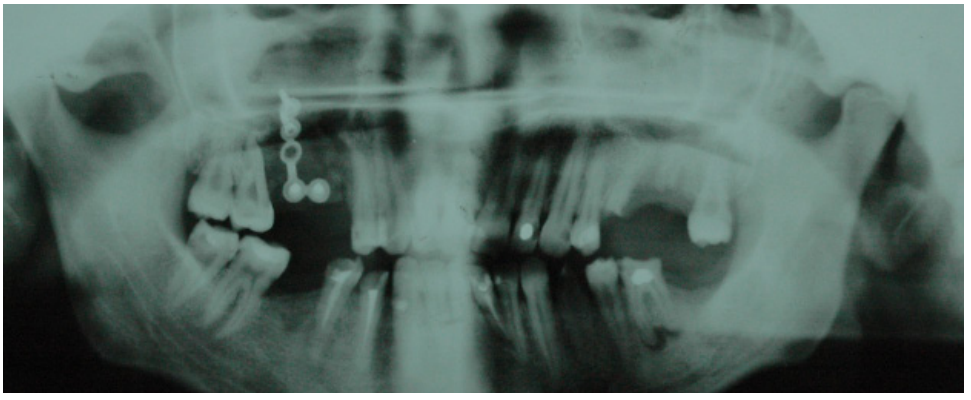

Figure 3. Panoramic radiograph after operation

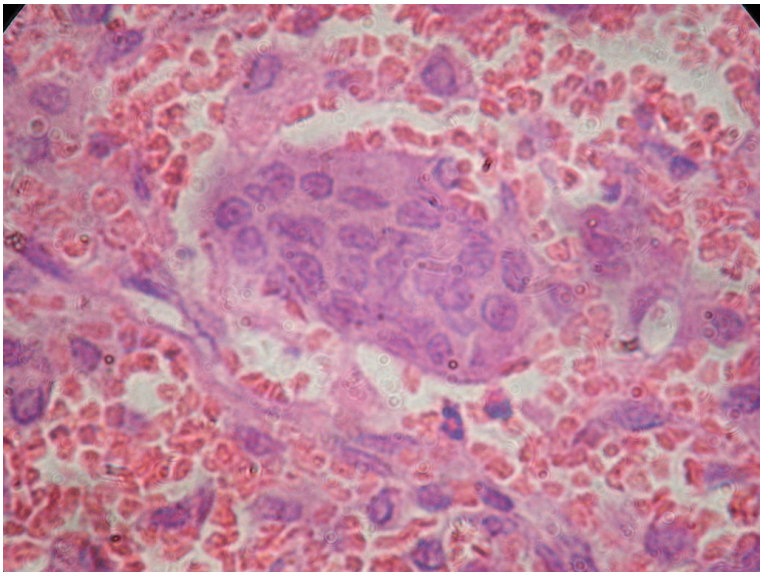

Figure 4. Microscopic view of the tumor illustrating odontogenic epithelial nests. Magnification of 200

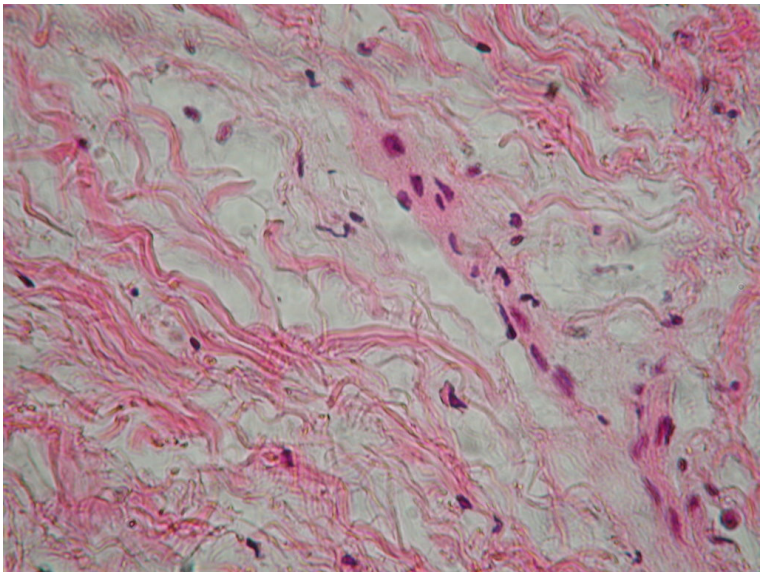

Figure 5. Myxomatous tissue showing fine collagen fibers. Magnification x 200

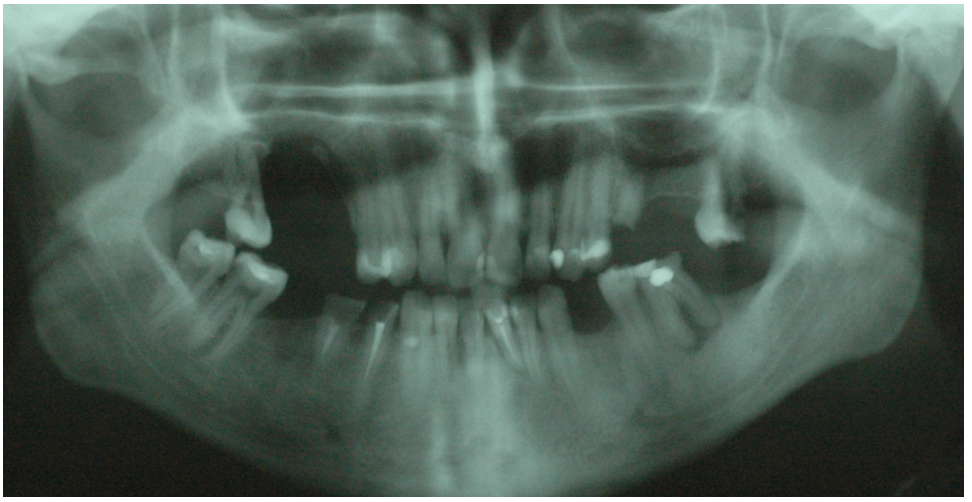

Figure 6. Panoramic radiograph 5 years after operation

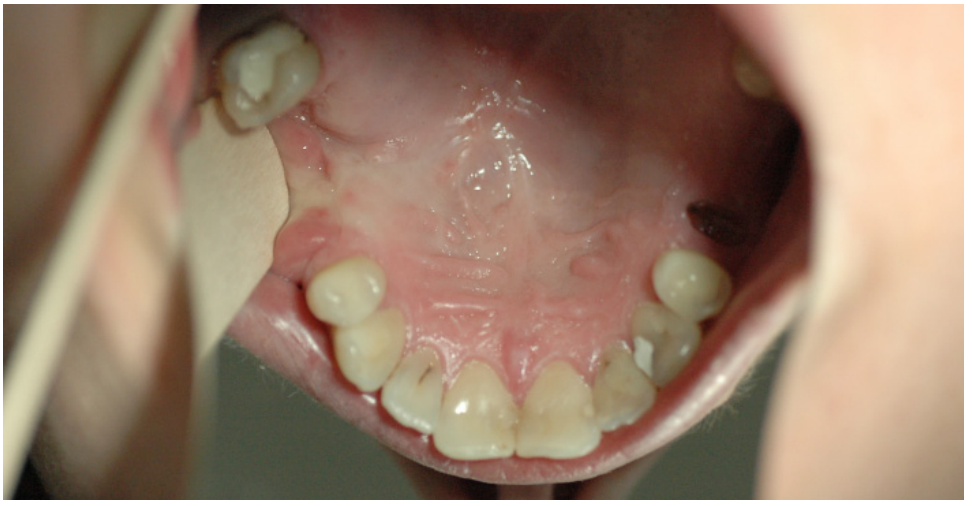

Figure 7. Intraoral photo taken 5 years after operation

CONCLUSIONS

Odontogenic myxomas are found predominantly in the bone of the jaws and are considered slow-growing tumors with the potential for extensive bone destruction, cortical expansion, and a relatively high recurrence rate. Most odontogenic myxomas occur in the premolar and molar region of both jaws [4]. Odontogenic myxomas are usually characterized by cortical expansion of the jawbones and, in maxillary lesions, by frequent extension into the maxillary sinus [4]. Root displacement rather than resorption is the rule of jaw myxomas [4]. The specimens of the present series appeared macroscopically as an infiltrative mass of mucoid or gelatinous material. The tumor was composed

of loosely arranged, spindle-shaped and stellate cells many of which had long tapering cytoplasmic processes. The intercellular background was mucoid.

Mitotic figures and multinucleation were rare [4,6]. Recurrence rate differences are obviously related to the method of treatment, with conservative procedures resulting in more recurrences. Odontogenic myxomas are not encapsulated and often infiltrate through bone without any well-defined borders. Complete surgical removal can be difficult, especially in the maxilla because of the proximity of vital structures and the more complex anatomy. The recurrence rate can be greatly reduced by application of wide excision or resection of the lesion together with adjacent tissue [4].

The prime reason for recurrence is thought to be related to incomplete removal rather than the intrinsic biologic behavior of the tumor. Patients must be followed closely for at least 2 years because this is the most likely time for recurrence [4].

The location of fibromyxoma tumor in the area of the maxilla requires combined treatment by a dental surgeon and laryngologist due to the proximity of vital structures and the complex anatomy.

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ABSTRACT

Fibromyxoma is a locally invasive lesion that arises from ectomesenchymal tissue. It appears to originate from the dental papilla, follicle, or periodontal ligament. Fibromyxoma in the maxilla has been previously reported. Segmental maxillary resection and immediate reconstruction by vascularized buccal flap were performed. At 5-years follow-up there was no evidence of recurrence of the tumor, and good functional and aesthetic results were obtained.

The location of fibromyxoma in the area of the maxilla requires combined treatment due to the proximity of vital structures and the complex anatomy.

Keywords: fibromyxoma, myxoma, maxilla, odontogenic myxoma, odontogenic tumor

STRESZCZENIE

Włókniakośluzak jest miejscowo złośliwą zmianą, która wywodzi się z ektomezenchymy. Może pochodzić z brodawki zęba, pęcherzyka, lub więzadła okrężnego. Włókniakośluzaki w szczęce były wcześniej rozpoznawane. W danym przypadku została wykonana segmentowa resekcja szczęki z natychmiastową odbudową z użyciem unaczynionego płata z policzka. W 5-letniej obserwacji nie stwierdzono nawrotu nowotworu oraz osiągnięto zadowalające wyniki pod względem funkcjonalnym i estetycznym. Lokalizacja włókniakośluzaków w obrębie szczęki wymaga leczenia zespołowego ze względu na bliskość istotnych struktur oraz skomplikowanej anatomii tej okolicy.

Słowa kluczowe: włókniakośluzak, śluzak, szczęka, śluzak zębopochodny, guz zębopochodny