Chondroblastoma of the TMJ: Case Report

SUMMARY

Background: Chondroblastoma is one of the rare diseases. It often localizes in the epiphysis of the long bones. It is very rare in the flat bones (20% in men), especially in the facial bones and TMJ. Usually it is found in young people under the age of 20 and its rate in women is twice lesser than in men. Its etiology is still unknown. Case report: Patient M.P., a 45 years old male, applied to Clinic with limited mouth opening and swelling on the right periauricular masticatory region. The tumor was removed by surgical operation under the general anesthesia, sent to pathohistologic analysis, and the diagnosis of chondroblastoma was confirmed. Conclusion: Treatment has been successful and no recurrent findings or postoperative complications, including functional restrictions, have occurred in the one year following the complete tumor excision.

Key words: Chondroblastoma, TMJ

Introduction

Chondroblastoma is considered as one of the most rare tumors of the TMJ. Although chondrogen tumors are rare in mandibula, they are often characterized with malignancy. In 1931., the first detailed information about chondroblastoma was reported by Codman (in some literatures it is called “Codman tumor”). Because of chondroblastoma is differentiated from the giant cells, Codman suggested a new term “benign chondroblastoma”. In 1942, Iaffe and Lixtenstain reported “Giant cell chondromatous tumors of the epiphysis, 9 cases”. As it mentioned chondroblastoma is common in the epiphysis of long bones, it may be benign and malignant. In benign chondroblastoma, patients usually complain of discomfort, pain during exercise, contracture, muscular hypertrophy, limping (if tumor is located in lower extremities). In malignancy (malignization in 7% of patients), pain syndrome exacerbates suddenly, especially at nights. Disease is aggressive, manifested with complications such as partial fractures, edema and joint deformation. Far metastases are rare in malignancy. The treatment of chondroblastoma is only surgery: it includes extensive segmental resection and bone plasticity. Usually the prognosis of chondroblastoma is considered satisfactory, but in some cases the possible recurrence is not excluded during the first 3 years.

The aim of this paper was to describe the treatment of one case of chondroblastoma located in the temporomandibular region.

Case report

In 2015., a 45 years old male applied to our Clinic with limited mouth opening and swelling on the right side of his face. Asymmetry on the face configuration was noted by visual examination due to the swelling on the right periauricular masticatory region. MRI showed a neoplasm in the right pterygomandibular region, in the projection of the lateral pterygoid muscle (Figure 1). On palpation, the swelling was hard and elastic consistency. The mouth opening was painful and limited. According to the anamnesis, although the patient consider himself as sick during approximately 2 months, he did not receive any treatment. The differential diagnosis should included bone cyst, chondroma, osteoma, chondrosarcoma and osteosarcoma. After preparation of patient for surgery the removing of tumor was done via preauricular approach under the general anesthesia (Figures 2 & 3).

Davudov Mahammad1, Rahimov Chingiz2, Ahmadov Elchin3, Irannejad Farinaz4, Qurbanov Vugar5
1 Department of Oral and Maxillofacial Surgery, Azerbaijan Medical University Baku, Azerbaijan
2 Department of Oral and Maxillofacial Surgery, Azerbaijan Medical University Baku, Azerbaijan
3 Department of Oral and Maxillofacial Surgery, Azerbaijan Medical University Baku, Azerbaijan
4 Department of Oral and Maxillofacial Surgery, University Samsun, Turkey
5 Department of Pathology and Laboratory Medicine, University Samsun, Turkey

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Figure 1. MRI of TMJ

Figure 2. Preauricular approach

Figure 3. Intraoperative view

Figure 4. Histologic view. Staining HE, X200

Figure 5. 3 months after surgery

Figure 6. The limited mouth opening is relatively eliminated
The removed neoplasm was sent for pathohistologic analysis. Any complication was noted during surgery and after surgery. Reactive bone fragments, fibrous stroma, cell proliferation which includes chondroblasts in some areas were seen in pathohistologic result. Necrosis and high mitotic activity were not noted (Figure 4). No recurrent findings or postoperative complications, including functional restrictions, have occurred following complete tumor excision (Figures 5 & 6).

Discussion

Chondroblastoma is a rare tumor which is the 1% of all bone tumors1. According to some literature, Blaauw et al.10 summarized the report of the chondroblastoma of the skull bones in 44 cases. There are some reports regarding the chondroblastoma of mandibular condyle11-15. Some authors think that the localization of tumor depends of age. Although the intracranial and extracranial localizations of tumors are more common in older population, contrary in long bones this rate is lower in older population1-4.

Local pain is common symptom in case of chondroblastoma. Because of the tumor localized in TMJ, the motion of mandible is limited, and edema of the face is visible. The basic complains of our patient were limited mouth opening, pain and swelling of the face.

As a rule X-ray examination shows the chondroblastoma in extremities as a sharp boundary, round-egg shaped and calcinated. In microscopic examination polyhedral cells with round nucleus can be observed. Radiographically chondroblastoma of the TMJ could not be detected as clear and sharp. MRI is considered more accurately radiologic option in these cases.

Usually the tumor is not extensive, rarely its diameter is larger than 5 cm. In macroscopic examination tumor seems as gray – yellow or brown, hemorrhagic, cystic shaped and calcinated. In microscopic examination polygonal cells with round nucleus can be observed. Milazzo9 reported that chondroblastoma of mandibular condyle consists of proliferative cartilage tissue and multinuclear giant cells.

As clinical examination is not confirmative enough, the only confirmative diagnosis is pathohistologic analysis after the surgery. Like for other tumors, the treatment option of chondroblastoma is proper surgical operation. There are rare recurrence probabilities until 1 – 3 years.

Conclusion

Chondroblastoma of mandibular condyle is a rare tumor, usually clinically asymptomatic. Although chondroblastoma of mandibular condyle is rare, long-term observation is necessary for detecting recurrences. In presented case, the treatment has been successful and no recurrent findings or postoperative complications, including functional restrictions, have occurred in the one year following complete tumor excision.

References


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Correspondence:
Mohammad Davudov
Faculty of Stomatology, Azerbaijan Medical University
E-mail: mahammad_davud@mail.ru