



COMBINED TREATMENT OF A LARGE AGGRESSIVE CENTRAL GIANT CELL GRANULOMA (CASE REPORT)

Büyük Agresif Bir Santral Dev Hücreli Granuloma Birlikte Tedavisi (Olgu Sunumu)

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ABSTRACT

Central giant cell tumours are rare, accounting for less than 7% of all jaw tumours. These tumours are usually observed in women, occur most often in the mandible, and are more common in the second decade of life. Treatment consists of local removal, partial resection, or total resection. In this case, a 32-year-old female patient presented in our clinic with pain in the anterior mandible. No cervical lymphadenopathy was detected upon physical examination. No ulceration was observed during the intraoral examination, but sensitivity was found in the vestibular area. However, no sensation loss in any teeth or in the lips was detected. This case report presents a 32-year-old female patient with central giant cell tumour causing extensive bone loss in the mandible base that was treated with partial resection.

Keywords: Giant cell granuloma, Mandible, Resection

ÖZ

Santral Dev Hücreli tümörler; çene tümörleri içinde kadınlarda ve mandibulada sık görülürler ve yaşamın ikinci dekadında daha sıklırlar. Tedavisinde lokal küretaj, parsiyel rezeksiyon ve total rezeksiyon uygulanabilir. Bu vaka raporunda 32 yaşında kadın hasta anterior mandibulada ağrı şikayetiyle kliniğimize başvurdu. Fiziksel muayenede servikal lenfadenopati saptanmadı. İntroarol muayenede ülserasyon saptanmadı fakat vestibül bölgede hassasiyet mevcuttu. Bununla beraber dişlerde ve dudakta his kaybı yoktu. Bu vaka raporunda 32 yaşında kadın hastada mandibula basisinde yaygın kemik kaybına neden olan santral dev hücreli tümörün parsiyel rezeksiyon ile tedavisi sunuldu.

Anahtar Kelimeler: Dev Hücreli Granüloma, Mandibula, Rezeksiyon

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INTRODUCTION

Granulomas are benign aggressive jaw tumours that are rare and occur mostly in the mandible of women under 30 years of age.¹ This tumour type was first identified by Jaffe. Although the aetiology is not completely known, granulomas are thought to occur due to trauma, infection, and heredity.² Granulomas have a unilocular or multilocular radiolucent appearance, and curettage is most commonly used for treatment. However, partial resection or total resection is needed in delayed cases.³ The treatment by partial resection of a central giant cell tumour (CGCT) in the mandible is presented in this case report.

CASE REPORT

A 32-year-old female patient presented to our clinic with pain in the gonion, but no intraoral or extraoral palpable or lymphadenopathy (LAP). Sensitivity was observed in the gonion. Upon intraoral examination, the central mandible teeth were found to have been previously extracted, but no infections were present in the teeth. A multilocular wide radiolucent lesion, which had caused full bone loss in the mandible base, was identified in a panoramic radiography and tomographic image (Figure 1, 2).



Figure 1. Panoramic film before operation

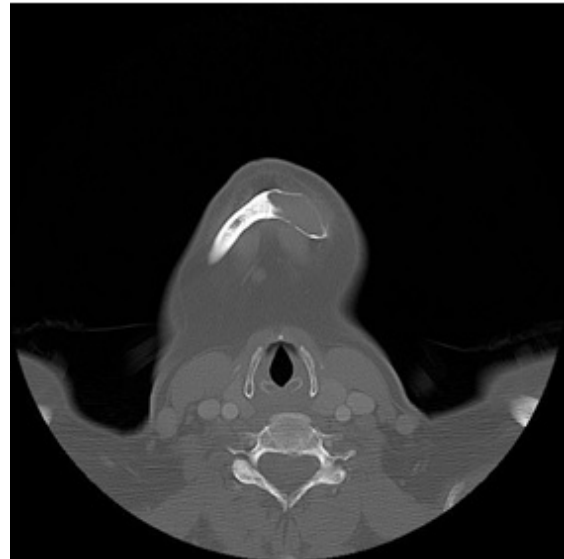


Figure 2. BT imaging before operation

The decision to operate was made. Due to the lesion's position and the estimated need for reconstruction, the lesion was resected using an extraoral approach (Figure 3).



Figure 3. Extraoral approach to tumour

The missing mandible section was reconstructed with plaque at the base (Figure 4), and the surgical incision was closed with primary sutures (Figure 5).



Figure 4. Placement of reconstruction plaque



Figure 5. Extraoral suturing

The post-operative images revealed that the plaque position resulted in continuity in the mandible base (Figure 6).



Figure 6. Panoramic film taken after operation

The patient was given post-operation antibiotics and analgesics. The obtained tumour material was delivered to the department of pathology for histopathologic examination (Figure 7).



Figure 7. Removed tumour material

Histopathologic examination identified the tumour as CGCT (Figure 8).

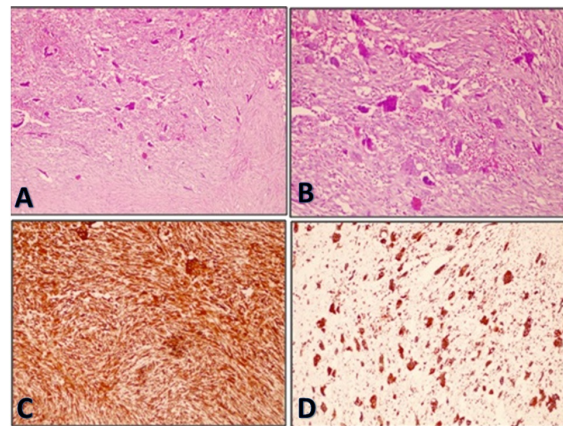


Figure 8A (H&E× 10) and 8B (H&E×20). In addition to many osteoclast-like multinuclear giant cells, haemorrhagic vascular areas, and occasional mitotic activity are observed by H.E. staining.

Figure 8C (Vimentin×20) and 8D (CD 68). The specific appearance of giant cells and mesenchymal structure are shown on immunohistochemical examination with vimentin staining.

After 1,5 year following there was no recurrence and healing was perfect on panoramic graphy (Figure 9).



Figure 9. Panoramic film after 1,5 year

Intraoral and extraoral view after 1,5 year was natural and there was no esthetic problems (Figure 10,11).



Figure 10. Intraoral view after 1,5 year

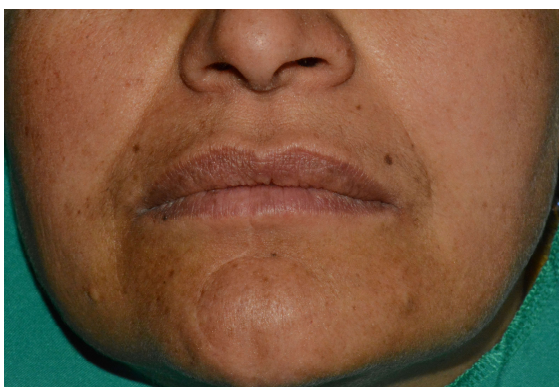


Figure 11. Extraoral view after 1,5 year

DISCUSSION

There are two clinical types of giant cell granulomas. Central giant cell granulomas are generally observed in the mandible, and rarely in the maxilla; they usually occur between 10 and 20 years of age. Giant cell tumours can also be found in the ethmoid, sphenoid, and temporal bones.^{4,5} The peripheral type of giant cell tumour is mostly observed in women under 30 years of age. Called giant cell epulis, it is observed on the gingiva, as distinct from CGCT.⁶ Despite the difference in their locations, there are no histopathologic differences between these tumour types. The detection of giant cells during histopathologic examination is definitive for the diagnosis.² Giant cells are generally observed in the mandible and first molar.⁷ In this case, the cells

were observed in the anterior mandible, which is different from previously reported cases.

CGCTs usually reveal themselves as painless paniculas.⁴ In this case, no panicula was present, and the patient's primary complaint was pain. Pain can be related to tumour size and location relative to nerves. The general approach to CGCT treatment is curettage, and this approach has a reported success rate of 80%.^{7, 8} However, curettage may not be sufficient in cases of delayed diagnosis, and partial or total resection can be implemented in such cases.⁹ Some researchers have suggested corticosteroid injection into the lesion to minimise tumour volume before surgery.¹⁰ In this case, the patient recuperated after partial resection and later reconstruction.

CONCLUSION

A surgical approach generally results in successful CGCT treatment, and a surgical method can be modified based on patient need and the size, localisation, and recurrence likelihood of a tumour.

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