EurAsian Journal of Oral and Maxillofacial Surgery
Official publication of AÇBİD (Association of Oral and Maxillofacial Surgery Society)

CASE REPORT

Diagnostic Handicap: RHABDOMYOSARCOMA

Tolga BAYAR, DDS[1], Ebru Deniz KARSLI, PhD,DDS[1], Betül TAŞ ÖZYURTSEVEN, PhD, DDS[1], Metin GÜNGÖRMÜŞ, PhD, DDS[1]

Gaziantep University, Faculty of Dentistry, Department of Oral & Maxillofacial Surgery, Gaziantep

Abstract

Introduction: Rhabdomyosarcoma is a malignant tumor of childhood. It arises from mesenchymal cells differentiating into skeletal muscle.

Case-Report: A 17-year-old female patient referred to our institution, biopsy was taken from wound area thought to have developed due to traumatic occlusion in the left cheek and sent for histopathological evaluation. In the postoperative 1st week, a growth of approximately 4 cm was observed in relevant tissue. Since histopathological examination came with diagnosis of "granulation tissue", he was called for a control one week later. It was observed that the growth increased to 8 cm in 2nd week. In the second biopsy, samples were taken from different parts of tissue. Histopathological report this time was concluded as "Embryonal rhabdomyosarcoma".

Conclusion: If the patient was sent with the diagnosis of cheek bite with a treatment protocol including preventive nutrition and restorative arrangements, rhabdomyosarcoma would not be diagnosed at an early stage.

Keywords: rhabdomyosarcoma, embryonal, neoplasm

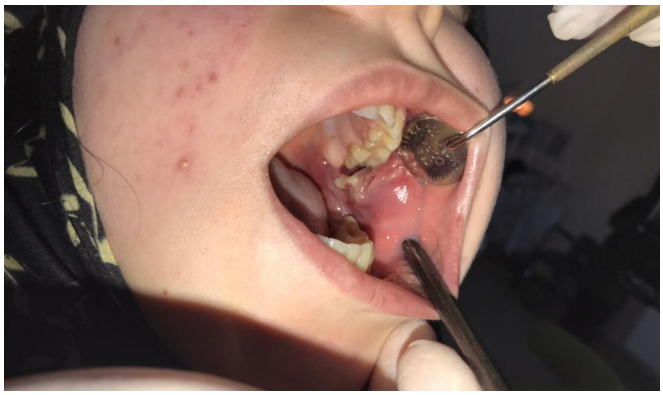
Introduction

Rhabdomyosarcoma (RMS) is a malignant tumor of mesenchymal origin first described by Weber in 1854. (1) RMS constitutes 20% of all solid tumors seen in childhood, originating from embryonic mesenchymal cells that can differentiate into skeletal muscle. (2,3) It is more common in boys (58.4%) than girls. (4)
The survival rate of %25 only with aggressive surgical treatment has been increased to %70 with multiple treatment protocol provided by inclusion of radiotherapy and chemotherapy.
Although approximately 40% of the RMS cases are located in head and neck region, intraoral appearance is rare. Paranasal sinuses and neck are the most frequently affected areas in the head and neck region. (6)

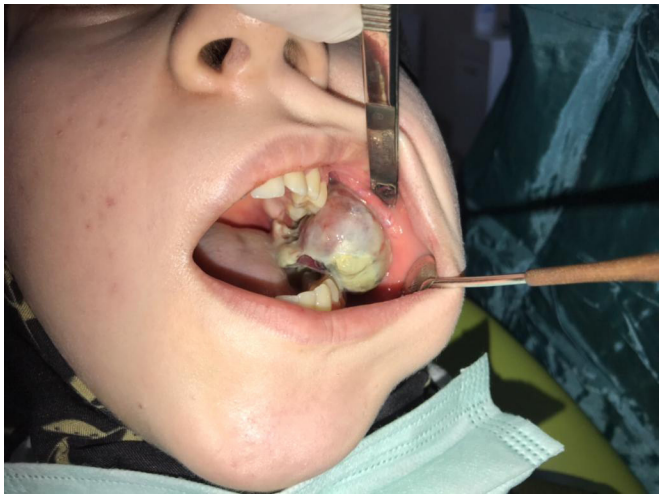
Case Report

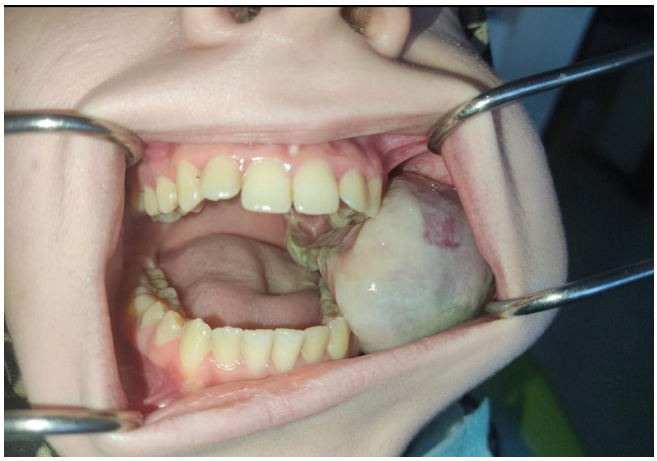
A 17-years-old female patient, who was referred to us from another institution, had a complaint of cheek biting, thought to be due to traumatic occlusion in the left cheek. After clinical and radiological examination, it was observed that the third molar teeth did not erupt, and it was learned that she had no complaints other than pain due to cheek biting while chewing for about a month.
A biopsy was taken from the scar-like tissue of approximately 1 cm in the posterior region of the left cheek mucosa (Figure-1). In the first postoperative week, a growth reaching approximately 4 cm in size was observed in the relevant tissue (Figure-2), even the biopsy result came as "granulation tissue". A soft diet was recommended and she was scheduled for control in the second week. It was observed that the mass grew even more and reached a size of approximately 8 cm (Figure-3).

Considering this rapid and excessive growth, it was decided to perform a second biopsy and the biopsy was performed from 3 different parts of the mass; the largest being 2 cm and the smallest 1 cm. The result of the second biopsy came as "embryonal rhabdomyosarcoma". Following the surgery patient was directed to the Department of Oncology for a multiple treatment protocol, including chemotherapy and radiotherapy.



Corresponding Author: Tolga BAYAR
Research Assistant
Address: Gaziantep University Faculty of Dentistry, Oral and Maxillofacial Surgery, Diyarbakır/Turkey
Karşıyaka Mah. 4002 Sk. No:12 Kapı No: 48 Karaköprü / Şanlıurfa
Mobile: +90(536) 435 66 42
E-mail: dttolgabayar@gmail.com





Results

In this case, RMS would not be diagnosed at an early stage if the patient had been treated for cheek biting diagnosis with nutritional and restorative adjustments. Patients should be thoroughly examined. Biopsy results alone should not be determinative and clinical manifestations of the case should be followed carefully to avoid the diagnostic handicaps. Our case led us to the diagnosis of a malignant tumor which could easily be overlooked if careful follow-ups are not provided.

Discussion

The frequency of RMS increases between the ages of 2-6 and 10-18. (7) Our patient was 17-years-old.

Hearing disorders, vision, speech, swallowing and respiratory problems may develop when RMS is located in the head and neck region. (8) In the presented case; the preoperative complaint was pain caused by cheek biting and postoperative complaints were speech disorder and facial asymmetry due to the growth of the mass.

Horn and Enterline divided RMS into four histological subtypes as embryonal, botryoid, alveolar and pleomorphic. (9) Embryonal RMS is the most commonly seen type from birth to childhood with 60% survival rate, and mostly located in the head and neck region. (2,10)

Although 40% of RMS is seen in the head and neck region, intraoral location is very rare. (6) The most commonly affected tissue intraorally is the soft palate. (1) In our case, RMS was seen in the oral cavity and cheek mucosa, presenting an extremely rare location.

References

1. Stuart A, Radhakrishnan J. Rhabdomyosarcoma. Indian J Pediatr. 2004;71:331-7.
2. Weiner E. Soft tissue sarcoma, in Carachi R, Azmy A, Grosfeld JL (eds): The Surgery of Childhood Tumors, Oxford University Press, 2009, pp:210-242.
3. Ruymann FB. Rhabdomyosarcoma in children and adolescents. A review. Hematol Oncol Clin North Am 1987;1:621-654.
4. Mollen KP, Rodeberg DA. Diagnosis and treatment of rhabdomyosarcoma. in Coran AG, Adzick NS, Krummel TM, et al. (eds): Pediatric Surgery, Philadelphia, Mosby, 2012, pp:491-501.
5. Edland RW. Embryonal rhabdomyosarcoma. Am J Roentgenol Radium Ther Nucl Med 1965;93:671-685.
6. Seth T, Kempert P. Embryonal rhabdomyosarcoma of lower lip. Indian Pediatr. 2004;41:858-9.
7. Birch JM, Varley JM, Kelsey AM. Soft tissue sarcomas in 20 families with Li-Fraumeni syndrome. Third International Soft Tissue Sarcoma Congress, Stuttgart, Book of Abstracts 1997;15.
8. Dagher R, Helman L. Rhabdomyosarcoma: An overview, Oncologist. 1999; 4: 34-44.
9. Parham DM. The pathologic classification of rhabdomyosarcomas and correlations with molecular studies. Mod Pathol. 2001;14: 506-14.
10. Stobbe GC. Dargeon HW. Embryonal rhabdomyosarcoma of head and neck in children and adolescents. Cancer 1950;3:826-836.