

INTRODUCTION

Ameloblastomas are the most common benign tumors of odontogenic origin. Most cases are diagnosed in the third to fifth decades of life, making the occurrence of ameloblastoma in pediatric populations relatively rare. Ameloblastoma predominantly occur in the molar region of the mandible, presenting as a painless jaw swelling and are often diagnosed as an incidental finding. They are slow growing, locally aggressive tumors and lesions recur in about one out of every four patients. Management of these lesions is particularly complicated in pediatric patients due to the growth potential of the jaws.

CASE REPORT

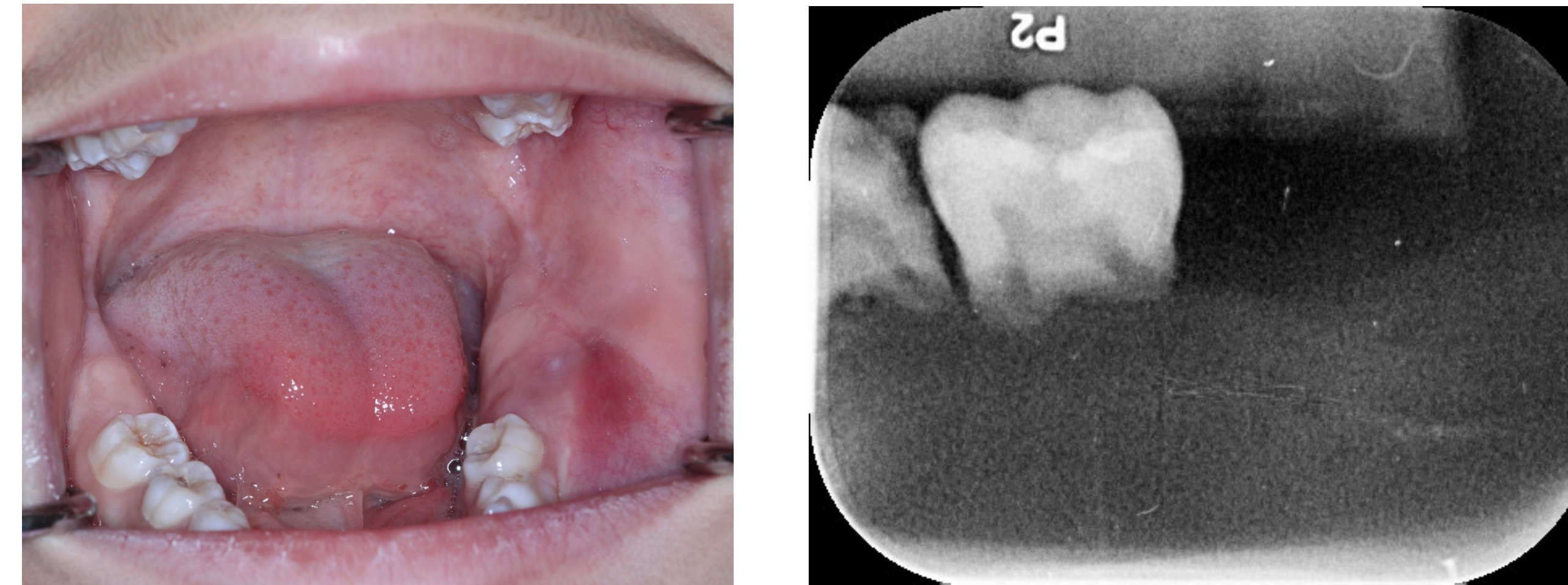
An 8 year old female presented to the University Hospitals Women and Children's Center Pediatric Dental Clinic for an appointment in January 2023. The patient was seen by a dentist for left mandibular swelling, placed on antibiotics, and referred for extraction of #K. The patient is otherwise healthy, with no medications or drug allergies.

Extraoral clinical exam revealed with facial asymmetry with significant swelling on patient left side. The mandibular mass was firm with slight tenderness upon palpation, slight lymphadenopathy was noted bilaterally. Patient reports no change in facial sensation, touch, cold, or heat. Intraoral examination reveals carious lesions on primary teeth including #L, K and missing #19. Initial periapical radiograph of #K reveals resorbed bone and roots #L, K, and missing #19. Panoramic radiograph was taken and revealed a large unilocular, radiolucent lesion expanding from the mesial of #19 to the distal of #22 and beyond the superior and inferior borders of the mandible, with displacement of #18, 19, 20, 21, 22. Resorption noted on # K, L, M.

The patient was referred to Case Western Reserve University School of Dental Medicine's Oral and Maxillofacial Surgery Department for diagnosis of ameloblastoma and to proceed with resection, reconstructive jaw surgery, and left inferior alveolar nerve repair with allograft.

CLINICAL AND RADIOGRAPHIC PRESENTATION

• Initial Presentation



• Surgical Resection and Reconstruction



DISCUSSION

Surgical treatment of ameloblastoma in children is complicated by its aggressive nature and high recurrence rate. Conservative surgery for ameloblastoma usually consists of enucleation and curettage, which is preferred in some cases to allow continued mandibular growth and preserve proper functioning in young patients. Conservative surgery, however, is associated with a high recurrence rate. More aggressive approaches involving resection of the tumor with a safety margin of 1cm or a hemi-mandibulectomy have higher success rates, especially in cases with advanced lesions.

Early diagnosis of ameloblastoma in children is essential due to the aggressive nature and complicated surgical follow up. This case emphasizes the importance of diagnostic radiographs as the patient was misdiagnosed with chronic periapical abscess due to clinical appearance alone and placed on antibiotics for several months. Due to the advanced stage of this patient's tumor, surgical resection was the chosen treatment method.

The patient is currently followed by Case Western Reserve University School of Dental Medicine's Oral and Maxillofacial Surgery Department for surgical follow up and the Pediatric Department for comprehensive dental care. Five months post surgery, patient reported sensation returning the left side of her face indicating initial success of inferior alveolar nerve repair. In July, 2023 patient was seen for the second phase of mandibular reconstruction: posterior iliac crest autograft and scar revision. Close monitoring and interdisciplinary management will be necessary as reconstructive surgery was completed prior to the patients pubertal growth spurt which could lead complications such as facial asymmetry and restricted mandibular growth.

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