

Rare case of **bilateral** mandibular keratocysts

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The diagnosis of cystic changes in the jaw presents a particular challenge for the treating physician. Radiologic images are not always unambiguous. Especially in the case of large cysts, particular care must be taken in planning the treatment

If findings are suspicious, reconstruction using alloplastic materials or autologous bone should be performed only after intraoperative frozen section diagnosis. This article describes a rare case of bilateral keratocysts in a child; a case that unambiguously turned out to be follicular cysts in preoperative radiographic studies.

Differential Diagnosis of Odontogenic Cysts

Casuistics

Following an initial orthodontic appointment, a twelve-year-old patient was transferred into our clinic for clarifying a tumefied bone area in his lower right jaw. The intraoral findings showed multiple remittent baby teeth as well as rock-hard bilateral tumors in the area of the premolars. The radiological investigation showed two sharply delimited areas of osteolysis with teeth 33 and 45 being impacted and displaced (Fig. 1). The medical history showed changes that had slowly developed over several years. The family's medical history was unremarkable. In view of the radiological manifestations, the initial assumption was that these were coronal follicular cysts (Fig. 2). Based on the minimal remain-

ing thickness of the compact bone and the patient's youth, a bilateral cystectomy was planned. Clinical findings indicated a pericoronal-type, follicular cyst at tooth 33 (Fig. 2) and a circumferential-type of follicular cyst at tooth 45 (Fig. 3). In consideration of the patient's age, the decision was made not to harvest cortical spongy bone of the iliac crest for a transplant, and osteoplasty was performed using a bloc of human spongy bone substance (Tutoplast®-Spongiosa-Block) (Fig. 4). The histological examination of the cyst sac showed the typical picture of an odontogenic keratocyst with parabasal epithelial components in a palisade-like arrangement. The squamous epithelium showed microfocal parakeratotic areas, while the basal membrane was intact. These areas included isolated lymphoplasmacellular infiltrates (Fig. 5).

Discussion

There is a clear discrepancy between the x-ray findings and the microscopic image. While development of follicular cysts also produces edentulous cysts during the early embryonic phase, follicular cysts develop together with a complete tooth during the crown formation period (Mittermayer,

Fig. 1_ Orthopantomograph of the patient showing the osteolytic areas near the mandibular bicuspid. Radiologic characteristics of a follicular cyst around displaced and impacted teeth. The cyst has consumed almost the entire bone of the lower jaw. Sharp demarcation from the surrounding tissue.

Fig. 2_ Clinical finding of tooth 33 with the cyst sac attached to the cervicocoronal transition as an example of a pericoronal cyst.

Fig. 3_ Clinical finding of tooth 45 with the cyst sac attached to the cervicocoronal as well as apical end of the tooth as an example of a follicular cyst of the circumferential type.



Fig. 1



Fig. 2



Fig. 3