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Mesiodens complicated by a dentigerous cyst in a 15 y.o. girl - a case report

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Abstract: Mesiodens is the most frequent form of hyperdontia and can cause delayed eruption of the permanent teeth, root resorption and formation of cysts. The article describes a case of a mesiodens complicated by dentigerous cyst in a 15 year old girl.

Key words: hyperdontia, mesiodens, dentigerous cyst

Introduction:

Mesiodens is a supernumerary tooth located between the maxillary incisors, occasionally in mandible. Etiology of this type of hyperdontia is as yet uncertain. There are various theories regarding its formation and congenital presence of mesiodens is inherited as autosomal dominant disease [1]. Mesiodens is most often diagnosed in children during change from primary to early permanent dentition. The presence of mesiodentes can cause delayed eruption of permanent teeth and can be a cause of resorption of adjacent roots or forming a cyst. Mesiodens is found usually basing on extra and intra-oral radiological examination. The treatment of choice is removing the mesiodens, and early diagnose can prevent complications [2, 3, 4].

The article presents a case of late identified mesiodens complicated by a dentigerous cyst in a 15-year-old girl.

Case report:

A 15 year-old girl was referred to the Department of Oral Surgery, Medical University of Lodz, due to a mesiodens found accidentally on OPG performed before the planned orthodontic treatment. Family history revealed no previous cases of supernumerary teeth. Intra-oral examination showed permanent dentition that required no restorative treatment, no delayed eruption or impaction of upper incisors, small diastema and irrelevant clinically hypertrophy of upper frenulum (Fig. 1).

CT of maxilla was performed, which showed a vestibularly located mesiodens along with a structure arising from the exogenous epithelium, which strongly resembled a dentigerous cyst (fig. 2). The supernumerary tooth was located near the upper right permanent incisor.

In general anesthesia, as a part of 1-day surgery protocol, the trapeze periosteal flap was cut and performed from the vestibular side from tooth 12 to 23. The diamond bur was used to remove the bone (fig. 3) and the supernumerary tooth was extracted and cyst enucleated (fig. 4 and 5). The wound was sutured and enucleated lesion sent for histopathological examination, which confirmed the initial diagnosis of follicular cyst. The patient was prescribed Clindamycin 0,3 (1 tablet every 8 hrs), and discharged in good condition home under the guidance of the parents. The follow-up visit revealed no complications apart from oedema. In 10th day post surgery the sutures were removed.

Discussion:

Hyperdontia occurs twice as often in men, and more often in permanent dentition. Mesiodens, which stands for a mesial tooth is the most common form of supernumerary teeth. They can interfere with eruption and alignment of maxillary incisors. Apart from delaying or preventing their eruption, they can also cause ectopic eruption or rotation of central incisors. Less common complications involve dilacerations of forming roots and root resorption. Complications involving a dentigerous cyst have been reported very rarely [1, 2]. In described patient the mesiodens was found accidentally and gave no clinical symptoms. The literature shows that mesiodentes are located usually in the anterior part of the maxilla [1, 2, 5], which corresponds with our case. In 30% of such patients two or more supernumerary teeth can be found [2]. The consequence of mesiodens in our case was a dentigerous cyst, which does not give symptoms until the cyst gets infected or the development of a cyst causes pressure on

anatomical structures. Absence of clinical symptoms is usually the cause of delayed and accidental finding of the abnormality, which is confirmed by our case, in which the cyst was found accidentally on an OPG. Undiagnosed cyst can be a cause of pathological bone fractures and symptoms caused by pressure applied to the nerve [6]. Histopathological examination of the material harvested during the surgery is mandatory for excluding the possibility of malignancy [7]. It should be noted that locally malignant lesions could be related to impacted teeth or tooth germs [8]. The treatment consists in enucleation of the cyst along with the capsule, because leaving fragments of capsule can cause a relapse or even malignant metaplasia [9]. In above described case the supernumerary tooth was extracted along with enucleation of the cyst as a one-step surgery.

The later the extraction of the mesiodens, the greater the chance that the permanent tooth either will not spontaneously erupt or will be malaligned when it does erupt. Unfortunately, by this time the forces that cause normal eruption of the incisors are diminished, and surgical exposure and subsequent orthodontic treatment are more frequently required

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Fig.1. Condition before the surgery; slight diastema visible.

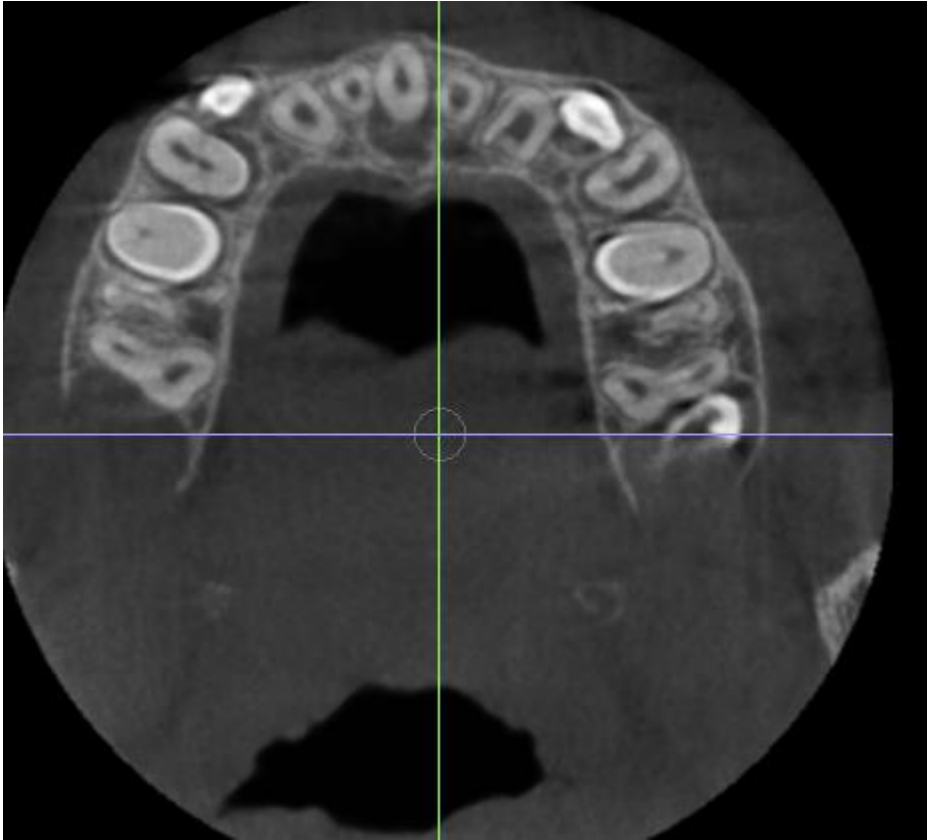


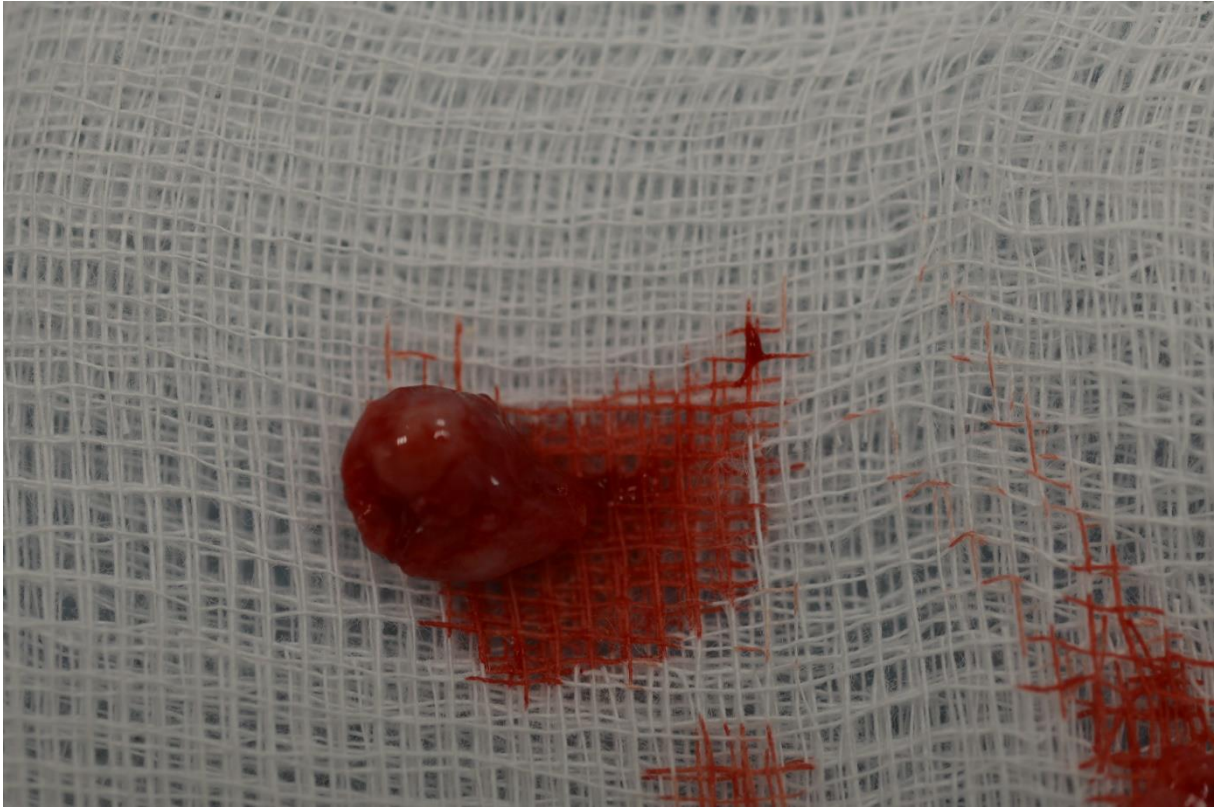
Fig.2. CT showing the mesiodens.



Fig.3. Bone removed from the vestibular side.



Fig.4. Removed mesiodens.



Ryc.5. Enucleated lesion.