Bąk Tomasz, Bal Wioletta, Topyła Weronika, Krasuska Beata, Gawęda Anna, Wojciechowicz Jolanta, Tomaszewski Tomasz. Total 36 tooth reinclusion in a 7-year old patient. Journal of Education, Health and Sport. 2018;8(1):121-127. eISSN 2391-8306. DOI http://dx.doi.org/10.5281/zenodo.1161689
http://ojs.ukw.edu.pl/index.php/johs/article/view/5222

The journal has had 7 points in Ministry of Science and Higher Education parametric evaluation. Part B item 1223 (26.01.2017).
1223 Journal of Education, Health and Sport eISSN 2391-8306 7

The authors declare that there is no conflict of interests regarding the publication of this paper.
Received: 05.12.2017. Revised: 15.12.2017. Accepted: 28.01.2018.

Total 36 tooth reinclusion in a 7-year old patient

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Abstract:

The phenomenon of permanent teeth reinclusion is an extremely rare occurrence both in clinical cases of patients and in literature descriptions. Untreated process may lead to many pathological consequences, such as: formation of abscesses, fistulas or, as in the case of the patient described, perforation of the buccal's bone plate covering the 36 tooth. The article describes a very rare case of complete reinclusion of tooth 36 in a 7-year-old patient. Taking into account the risk of surgical complications, it was decided to perform the procedure in a hospital's conditions.

Keywords: reinclusion,permanent teeth,perforation,

Introduction:

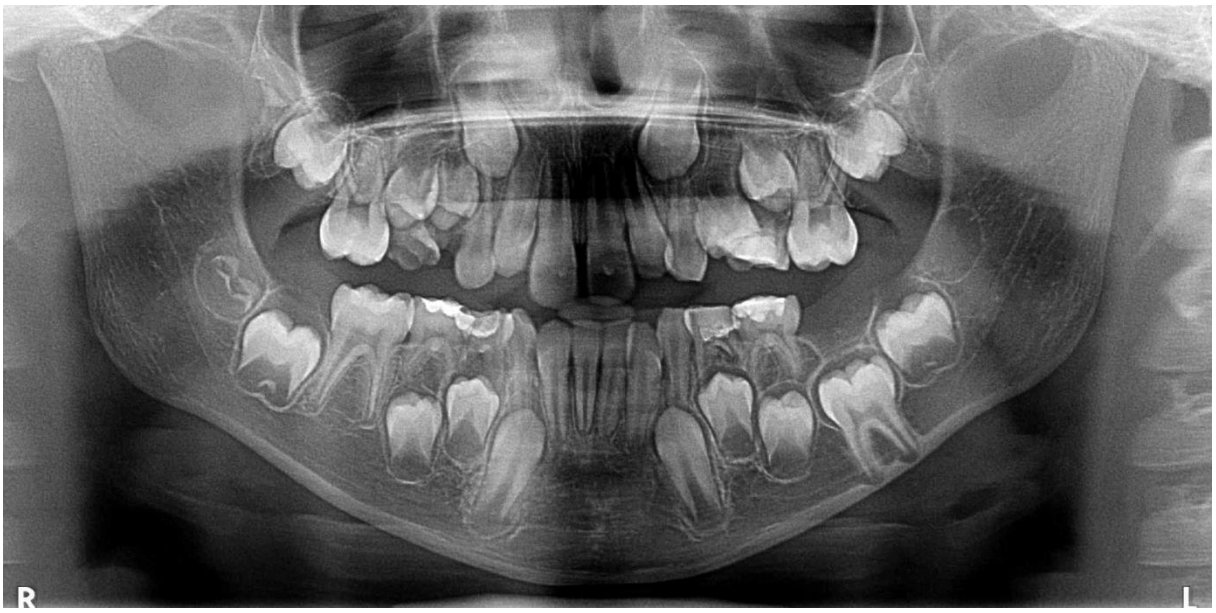
The gradual penetration of the tooth, previously completely or partially erupted, is called the reinclusion [1]. During the process, the tooth's contact with the opposing tooth is lost and the lower position is occupied to the occlusal plane due to the repenetration of the tooth in the surrounding tissues. It is a disorder with unexplained etiology [2]. This phenomenon occurs primarily in the milk teeth, although it can be extremely rare in permanent dentition [3]. The occurrence of this pathological process in the developmental period and especially in the permanent dentition causes big problems both in terms of diagnosis and treatment. Reinclusion occurs primarily during the period of teeth replacement. Radiologically, the periodontal membrane of the reincluded tooth may give the impression of being "bitten by moths". The tissue surrounding the tooth exhibits unusual thickening of bone beams and their concentration. Clinically, we can distinguish two types of reinclusion - partial and total [4]. In the first, tooth sinks into the middle of the neighboring crowns of teeth or deeper [4]. In the second one, the tooth is immersed within the mucous membrane, contact with the oral cavity is maintained by a narrow band forming a canal lined with epithelium [4]. The reinclusion process applies more often to the teeth of the mandible than the jaw [5]. Often observed complications of reinclusion are tooth abscesses and fistulas that occur as a result of caries, as well as the insertion of the tooth into the mandible canal or into the light of the maxillary sinus [6].

Case Report:

Patient K.K. 7 years admitted to the Maxillofacial Surgery Department of the Medical University of Lublin, due to the reincluded tooth 36. In the extraoral examination no abnormalities were found. In the intraoral examination: mixed dentition, numerous milk teeth, partially changed by caries. Tooth 16 completely reincluded.

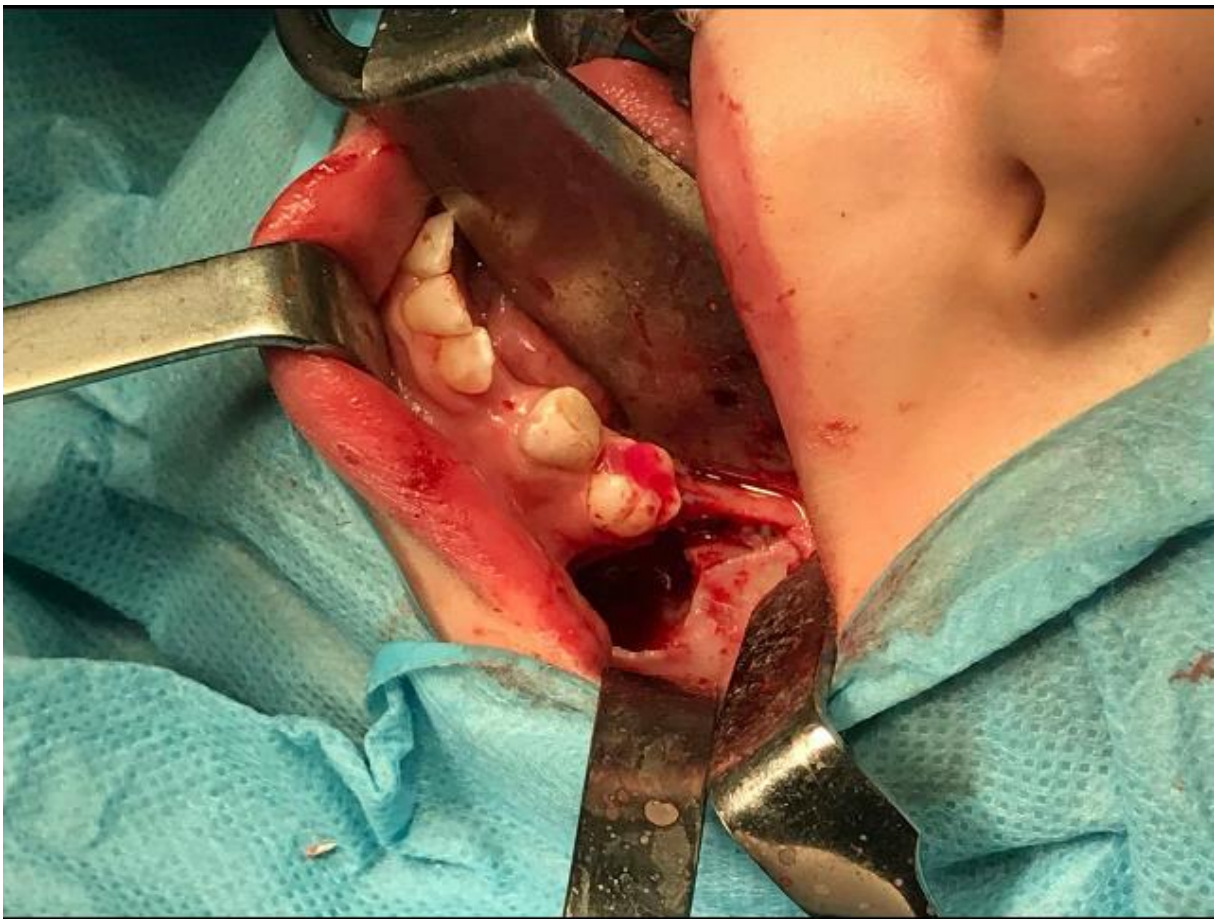
phot. 1 reincluded tooth 36 in CBCT scan

In the picture taken in the CBCT computed tomography: the lack of radiologically obstructive obstacles speaks for the original tooth reinclusion. The tops of the roots of tooth 36 are recessed within the cortical plate lamina area of the lower edge of mandible, the chewing surface of tooth 36 is about 8.4 mm below the ridge of the appendage. The development of the roots of the tooth has not been completely finished yet - stage G according to Demirjan.



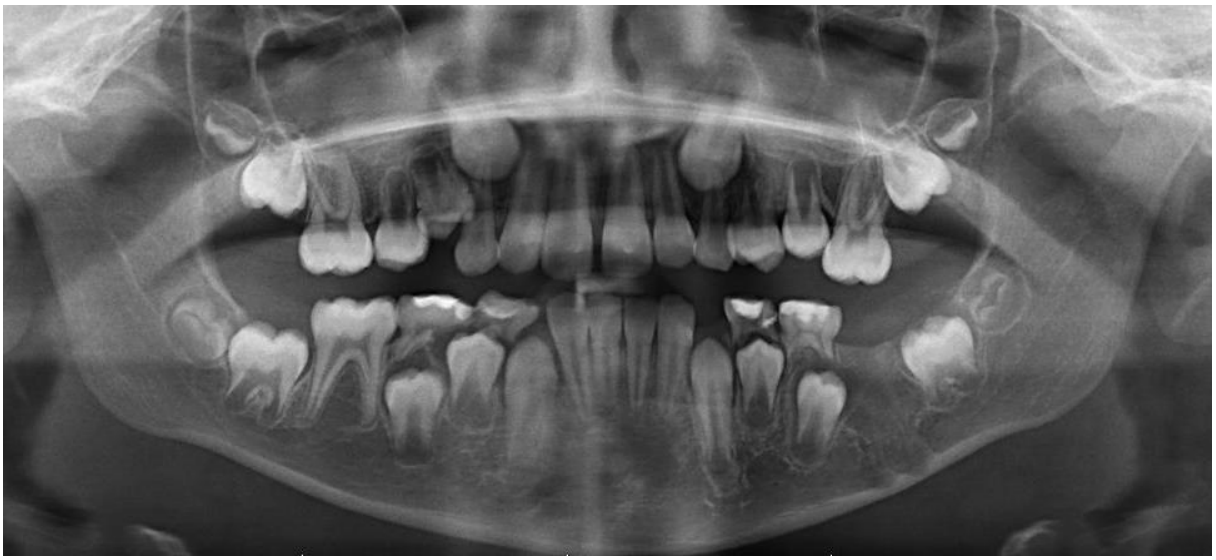
phot. 2 panoramical x-ray before the operation

Patient was intubated under general anesthesia, through the oral cavity. In the area of 36 tooth, a fragment of the bone covering the tooth 36 was exposed, which was then removed. Perforation of the buccal lamina covering the 36 tooth was recorded. Tooth 36 was extracted along with curettage of the alveolus. Spongostan was put inside the wound and the extraction area was sutured.



phot. 2 state after extraction of the reincluded tooth 36

The next day after the procedure the patient was discharged home. It was recommended to maintain the best oral hygiene and continuation of antibiotics Augmentin 325 mg x 3 times a day, a soft diet and control in the local outpatient clinic after a period of 7 days.



phot. 2 panoramical x-ray 3 months after the operation

Discussion:

Extinction of permanent teeth is an extremely rare phenomenon. This process is usually asymptomatic and painless. The treatment depends on the patient's age, the extent of the recess and the topography of the reincluded tooth, but first of all it is based on an individual analysis of the patient's bite.

Treatment attempts are described to achieve dereinclusion of permanent teeth [7]. In the case of partial reinclusion, a prosthetic superstructure can be up to a height of 4mm [8,9], which prevents further extrusion of the opposing tooth [10]. Orthodontic extrusion and surgical icing can contribute to the successful treatment of first molar ankylosis in children [11]. There were also described extrusion tests of reincludated teeth, through the use of flexible extracts, attached to the anchor in the form of implants or acrylate rails [4, 12]. Many authors recommend the extraction of reincluded teeth, in the case of significant abnormalities and complications, without waiting for the replacement of dentition [9], a similar treatment was used for our patient. Considering the rapid development of the pathological process - the perforation of the buccal lamina covering the tooth 36, it was justified to make a decision about the surgical extraction of the tooth. Due to the risk of complications during surgery, confirmed in numerous observations [9], it is advisable to carry out treatment in a hospital setting.

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