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Dislocation of the mandible in a 47 year old patient

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Abstract:

Dislocation of mandible is relatively uncommon disorder of temporomandibular joints. Disorder can occur during extreme dilation of mouth such as yawing, during dental treatments or endoscopic examination.

47- year old patient was admitted to the Department of Maxillo-facial Surgery in case of bilateral mandible dislocation. In this case the reposition in general anaesthesia was performed but ended up with failure.

Key words: dislocation, temporomandibular joint, reposition

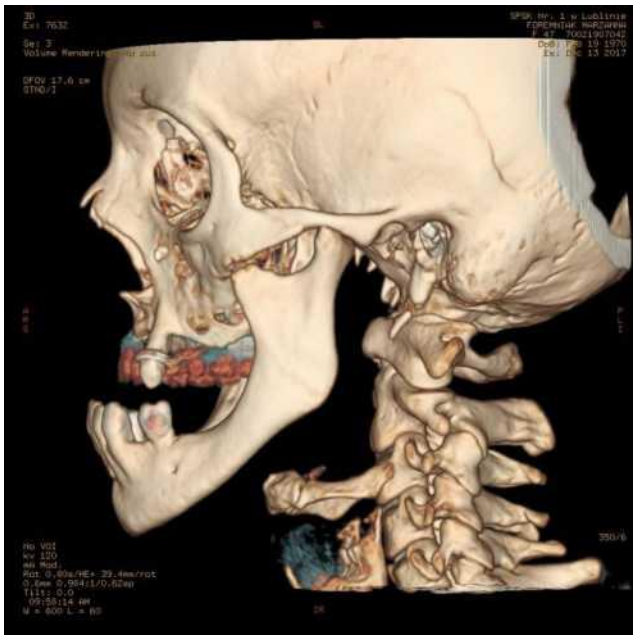
Introduction:

Dislocation of the mandible is relatively uncommon disorder of temporomandibular joints [1]. The main reason of that phenomen is displacement of condylar process beside temporomandibular joint with fixation in this position, with any possibility to return to correct location [2,3]. The most frequent is an anterior dislocation, usually bilateral, in which condylar process is in the front of articular tubercles [4].

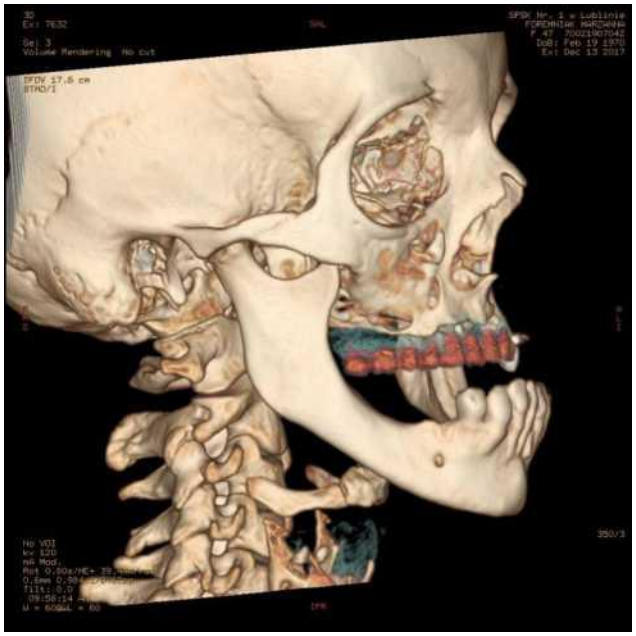
Disorder can occur during extreme dilation of mouth such as yawing, during dental treatment or endoscopic examination [5,6]. People with changes in the construction of condylar process are most predisposed to have dislocations. The modifications of condyle contain flattening, decrease the height of the articular surface and also inappropriate structure of zygomatic arch or squamotympanic fissure [7].

Case report :

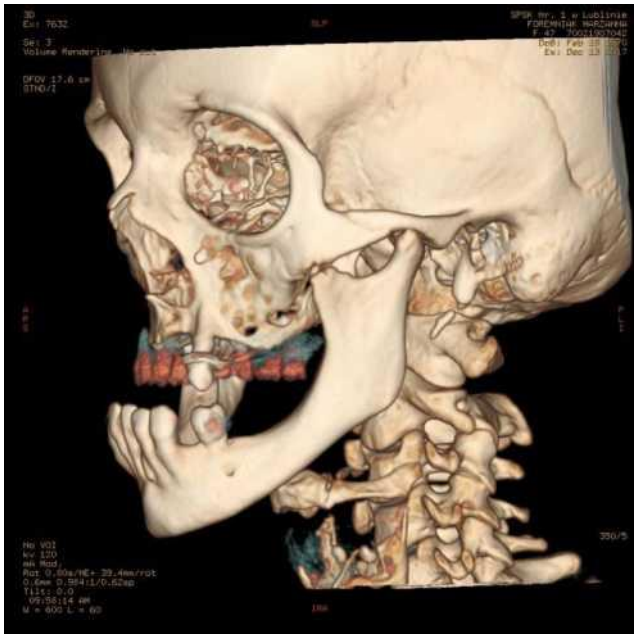
47- year old patient was admitted to the Department of Maxillofacial Surgery Medical University of Lublin in case of bilateral mandible dislocation. According to anamnesis, the disorder in temporomandibular joints occured 2 months before admission to the hospital. In physical examination, which was performed after accession, the negative horizontal occlusion, interposition of mandible and opening of mouth for about two fingers width were detected. As a result of above symptoms, patient's speech was incoherent and missunderstood. Moreover, while opening the mouth, mandible was distintcly swerving toward right side with characteristic click in this area. The woman complained about pain, especially in right temporomandibular joint and also difficulties with swelling. The computed tomography (CT) scan of cranium without contrast, was performed and it showed the anterior dislocation of both temporomandibular joints with deformation of heads of the mandible and malformation of posterior parts of zygomatic arches on right (Graphic 1) and on the left side (Graphic 2). Moreover there was an additional pathology, which was detected during CT scan, which was deformation of left coronoid process of mandible and anterior part of left zygomatic arch, in the place of adhesion (Graphic 3).



Graphic 1. Dislocation of temporomandibular joint, deformation of head of mandible and posterior parts of zygomatic arch on the right side.



Graphic 2. Dislocation of temporomandibular joint, deformation of head of mandible and posterior parts of zygomatic arch on the left side.



Graphic 3. Deformation of coronoid process of mandible and anterior part of zygomatic arch on the left side

In this case the reposition in general anaesthesia was performed but ended up with failure. The final diagnosis was bilateral chronic dislocation of temporomandibular joints. The woman was checked out from hospital with recommendations to avoid eating tough food and to make an appointment in outpatient's clinic in order to determine further therapy.

Discussion:

There is no doubt that the time, which passed after apearing dislocation of the manidble, has an enourmous influence on the selection of appriopriate therapy. The reposition of mandible in urgent situation, which consist of manual reduction in local anaesthesia, is effective and practicable by every doctor, even other specialization than maxillofacial surgeon [8]. When the time after occuring dislocation of mandible lasts more than 4 weeks, it is called chronic or reccurent dislocation [9]. In this case, the reduction in local anaesthesia should be done first [10]. According to data, it was the most frequent method chosen by surgeons [11]. Unfortunatelly, in cases of chronic disclocation of mandible it is relatively often connected with unsuccessfull result of a therapy.

Nevertheless, it is recommended that less invasive methods should be the first choice therapy before performing open surgery on temporomandibular joints. It is essential to remember, that chosen way of treatment should be always connected with the lowest risk for the patient, reposition of dislocation

with appriopriate functioning of organs and low chance for reccurence [9].

In described case, the next step in treatment should be indirect traction at the angle of the sigmoid notch with amplification of wires inserted in the angle of mandible [10].

In the event of further failures surgeons should consider more invasive methods such as mandibulotomy, arthroplasty of temporomandibular joints, open reduction in general anaesthesia or endoprothesis with artifical temporomandibular joints [9,11,12,13].

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