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CBCT imaging of temporomandibular joint ankylosis in children: a case report

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One of the main causes for temporomandibular joint disorder (TMD) is traumatic injury in oral and maxillofacial region. Symptoms of TMD include pain in auricular area, difficulties or uncomfortable during chewing, clicking sound appears when opening or closing the mouth, locked or dislocated joint, and uncomfortable bite due to premature contact of the teeth. Ankylosis is a condition in which condylar movement is restricted because of fusion of the intraarticular joint components ("true" ankylosis) or a physical impediment caused by structures outside the joint. The aim of this paper is to describe ankylosis temporomandibular joint disorder in children.

A 5-years-old girl was referred to Faculty of Dentistry Padjadjaran University Dental Hospital after a trauma in her mandible. The OPG shows fracture line in the right coronoid process, but the parents decide to ignore it. Three years later, she came again with chief complaint include limited mouth opening. Then the patient was referred to do a CBCT imaging in order to see the condylar head clearly. In the left condyle, there was caput condyle leveling with the position of having more anteriorly in the glenoid fossa with bone quality below normal. In the right condyle, there is a period of solid growth with irregular edges, localized in the anterior condyle of the arch area sandwiched zygomaticus with cortical bone density below normal, but trabecular structure are more tightly. There is no real difference in condition between opening and closing the mouth for the left and right condyle. Hence the radiodiagnosis are condylar hyperplasia of the right condyle accompanied by fibrous ankylosis of the left condyle.

CBCT imaging should have been chosen as primary imaging modality for the cases of suspected TMJ ankylosis due to its accuracy and viewing optional from different aspect, so there is no superimposition that could lead to misinterpretation.

Keywords: CBCT, Temporomandibular joint disorder