

Dislocation and Subluxation of the Temporomandibular Joint

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Abstract

This work and studies were describing the dislocation and subluxation of the temporomandibular joint (TMJ).

This kind of disease is not common in Europe but more common in Yemen and Somalia, because people habitual daily chewing Qat for several hours. This bad habit leads to damage and destruction of capsular ligaments of the TMJ and atrophy of articular eminence and shallow glenoid fossa.

The author described his own technique for reducing an acute dislocation conservatively under local anesthesia standing behind the patient, the surgeon should hold the body and angles of the mandible and rotating one side, by this movement, the condyle returned back to glenoid fossa and automatically the other side reduced by its self.

For the chronic types of dislocation and subluxation of the TMJ, the author advocate new technique for surgical reconstruction of the joint by using an inferiorly based pedicle flap from temporal fascia sutured to anterior and lateral wall of the capsule for reinforcement and augmentation of zygomatic root of temporal bone by bone graft from iliac crest to prevent forward movement of the condyle.

Keywords: *Dislocation; Subluxation; Temporo-Mandibular Joint (TMJ)*

Dislocation and subluxation of the temporo-mandibular joint (TMJ) are very unpleasant and distressing condition to the patient. They are not common disease but large group of people in countries like Yemen and Somalia are affecting due to daily habitual chewing Qat for several hours in the day. This condition is not common in Europe or Iraq.

Acute dislocation of the condyle from glenoid fossa is very painful and frightening and distressing to the patient. Sometime patient does not get proper doctor to reduce his dislocated TMJ and the patient in miserable status where the patient cannot speak or swallow or eat, this distressing condition, the patient looks upset and depressed.

Acute dislocation occurs when the mandible suddenly move or jump out of glenoid fossa or jump out of glenoid fossa ventral to the articular eminence and became locked anterior and superior to the articular eminence.

Subluxation of TMJ an excessive abnormal excursion of the condyle secondary to flaccidity or laxity of the capsule or a condition where the condylar head moves anterior to articular eminence in wide opening and the mouth can be closed again but slowly.

Acute subluxation always associated with pain due to intra articular effusion and muscular spasm. In the chronic recurrent subluxation, the condyle is sliding over articular eminence and catching briefly beyond the eminence and then returning to the fossa.

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Acute dislocation of the condyle always associated with pain and spasm of muscles of mastication of temporalis, masseter, medial pterygoid and lateral pterygoid that lead to trismus preventing return of the condyle to the glenoid fossa.

In cases of chronic unreduced dislocated condyle, the capsule of the TMJ became fused and adhere to the fascia of the infra temporal fossa.

The risk factors for dislocations are weakness and laxity of glenoid fossa capsule, anatomic aberration of the TMJ or to previous trauma and injuries to the capsule or due to abnormal chewing movements.

People and children more likely effected by this disease with general joint laxity (Ehler-Danlos Syndrome), or Marfan syndrome and juvenile rheumatoid arthritis in children.

In old people where effected by this disease due to laxity of the capsule ligaments, weak muscles and bone resorption due to aging.

Young people with internal derangement of the TMJ with occlusal disturbances and people chewing gum daily for several hours and habitual nut chewing are more liable for this disease. Trauma play an important factor for development of this disease like prolong mouth opening during dental treatment or by force opening of the mouth by laryngoscopy by the anesthetist or by using bronchoscopy examination of bronchus.

The daily use of Qat in Yemen and Somalia produces excessive load on the TMJ by changing its normal excursion masticatory movements of the jaw to abnormal rotational movements leading to osteoarthritic changes and atrophy of articular eminence and destruction to the glenoid fossa capsular ligaments and shallow glenoid fossa.

Radiological examination required by CT Scan with 3 dimensions, orthopantogram (OPG) and tomography of TMJ.

The managements either by conservative technique for reduction of dislocated condyle in acute cases, the old technique is by standing in front of the patient and grasping lower jaw with practicing downward and backward movement for reduction might be done under sedation or under general anesthesia.

The author advocated better technique under local anesthesia by injecting few drops in both joints with assurance of the patient to be relaxed, the surgeon stand behind the patient and holding the patient lower jaw firmly in the angle regions and started by rotational movement of one side, the condyle suddenly jump to glenoid fossa and automatically the other side was reduced.

The surgical option recommended for the chronic cases of subluxation and dislocations of the TMJ.

The author advocated the surgical technique for reconstruction of the capsule by finger shape inferiorly based temporal fascial flap of about 4 - 5 cm length dissected from temporal fascia and turned down for reconstruction of lateral and anterior sides of the lax capsule for reinforcement and a bone graft from iliac crest of about 1 and 1/2 cm length with ½ cm width inserted in a gap created by ostectomy as oblique 45° directed towards the capsule in front of articular eminence, the bone graft impacted in the ostectomy site and work as obstacle to prevent forward movements of the condyle [1,2].

Conclusion

The author described two technique one conservative for management of acute dislocation of the condyle and a surgical technique for managements and reconstruction of damaged TMJ of chronic recurrent of dislocation and subluxation.

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