

TMJ orders & disorders

Editorial

In our daily practice, we meet a lot of patients suffering from TMD. And most of the doctors transferring the patients to other clinics because they believed that, “TMD patients are chronic patients and cannot be treated easily”. In a matter of fact this concept was established due to triad of failure which consists of; Lack of Knowledge, Lack of Understanding & Ego.

When we are studying the TMJ we have to remember it's a moving structure. So if we depend on the surface anatomy of the TMJ we will miss too much information. The key point of success is to know and understand the functional anatomy and biomechanics of the TMJ so we can understand the TMJ orders.

The functional anatomy and biomechanics of the TMJ it means the functional harmony between the TMJ, occlusion, and muscles. Once we understand the functional harmony between these triad we can easily recognized and understand functional disharmony between these triad and subsequent the TMJ disorders.

TMJ stability (Orthopedic stability) & Occlusion stability are depended on each other's. The TMD patients doesn't have stable joint which mean subsequent occlusion instability. In all types of our dental treatments we are dealing with the occlusion, so how can we establish the definite treatment if we have instable occlusion (due to orthopedic instability or TMJ instability).

In order to understand the TMJ orders and disorders, we have to start from the basic knowledge especially the biomechanics and functional anatomy and off course the occlusion. The role of occlusion, anterior guidance, and posterior guidance, in development of the TMD beside the role of orthodontic treatment as contributing factor in the development of TMD and in the same time its role in the treatment of TMD and prevention of the relapse should be fully understanding.

As we know, the MRI is considered as the gold standard for diagnosis of TMD. Most of the doctors when examine the MRI, they just look at the disk if it's displaced or no. while the MRI have a lot of information not only related to the position of the disk. The disk shape, disk signal intensity, the joint effusion, state of the lateral pterygoid muscle (Hypertrophy, atrophy, contraction), joint space, Condylar Guidance (Posterior Guidance), condylar position (Anterior, posterior, centric), bony marrow of the condyle, state of the posterior attachment, and arthritic changes structure of the joint are so important finding for establish of the accurate treatment plan.

Airway is one of missing factors that affect the TMD. Patient with obstructive airway disorders start to have mouth breathing. In normal breathing, the pressure form the cheek musculature is balanced by the palatal position of the tongue. During mouth breathing the tongue move in downward direction to open the way for the air to pass. This resulted change of the arch shape from U shape to V shape because of the pressure of the muscles of the cheek which worked now unbalanced.

During mouth breathing, the tongue rest on lower posterior teeth (lateral tongue thrust) leading to super eruption of the lower anterior teeth and subsequent change of the curve of Spee. Both of the change

of the upper arch into V-shape and the change of the curve of Spee lead to movement of the mandible to posterior direction as compensatory mechanism. Posterior movement of mandible resulted in posterior movement of the condyle within the glenoid fossa resulted in pressure on the posterior attachment of the TMJ with subsequent pain and predisposing to disk displacement.

Underestimation of the psychological factor in TMD patient usually lead to failure of the treatment. Psychological factor can be predisposing, initiating, or propagating factor. Psychological factor is the major factor in pediatric TMD patients which usually required psychological consultation for the parents of the kid.

Non-surgical Treatment modifies of the TMD including splint therapy as the main treatment modality. Arthrocentesis with or without joint injection are effective non-invasive treatment in selected cases. Physiotherapy, medication, and laser are used as adjunctive therapeutic modalities with the surgical option as the last treatment option after the repeated failure of the non-surgical treatment modalities.

TMJ disorders are multiple disorders with multifactorial causes. Hegab Strategy for the treatment of the TMD patients can be summarized by TO-MAP/Full Attack. The rational of the strategy is to cover all the aspect of the TMD patients (Full Attack). The aspects including in the TMD patients are; TMJ (T), Occlusion (O), Muscles (M), Airway (A), & Psychology (P).

The road of success for treatment of the TMD patients should cover all the aspects of the disorders while focusing on one aspect usually result on mild or no improvements and subsequent relapse and failure of the treatment.

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