

# Importance of Identification of Temporomandibular Joint Disorders and Appropriate Referral

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Temporomandibular joint (TMJ) is a unique joint having a fibrous avascular disc. It is a diarthrodial ginglymoid joint having an articular surface which includes two distinct condyles of the mandibular bone fitting into reciprocally concave surfaces in the temporal bone just in front of the ear. They permit movement both in transverse axis and a vertical axis. Bilateral joints work synchronously with the dentition and occlusal loading along with the various masticatory muscles together contributing to the healthy stomatognathic system. Any interference in one of the components of this system can adversely affect the TMJ. The peculiarities of the temporomandibular joint are summarized in Table 2.1.

Temporomandibular disorders (TMDs) can often be confused with oro-facial pain of varied origin, otalgic pain or pain originating from the

**Table 2.1** Peculiarities of the temporomandibular joint

1. Acts as a growth centre and demonstrates structural changes in the joint per se with age.
2. It has bilateral synovial articulation between the mandible and temporal bone which work in synchrony.
3. Ginglymoarthrodial joint—Only joint in the body that has rotation and translatory movements.
4. Presence of an avascular intervening disc.
5. The fibrocartilaginous disc is dynamic with its movements controlled by lateral pterygoid muscle on joint movement.
6. TMJ is influenced by the stomatognathic system (occlusion, surrounding muscles) and requires harmony for its function.
7. Important joint for vital functions like speech, mastication.
8. Local surgical anatomy for surgical access to the TMJ involves vital structures like facial nerve, which require special training in order to perform open joint surgeries.
9. Harmony in function between the intervening disc, osseous joint, and the muscles controlling the movement.

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cervical region as the joint is closely associated with these anatomic structures. The clinicians may face difficulty at times in diagnosing TMDs. Patients present with wide range of symptoms such as pain while chewing, pain in the ear or in front of the ear, or with nonspecific referred pain to the forehead and the neck. Most patients report to the general physicians or the dentists, some of them may further be referred to an otolaryngologist or an ear nose throat (ENT) specialist without an appropriate recognition of the TMD. Few

patients consult with an orthopaedic specialist considering the fact that a recognized problem is present in the joint and a neurologist may come into play when there is a referred pain on the face from the joint.

Most treating clinicians may not be involved in treating the problems of the temporomandibular joint routinely and may find it difficult to diagnose and treat temporomandibular disorders with precision. The fact that the medical or dental graduates and specialists are less aware about the various treatments performed by a specialist trained to treat TMDs, is in itself a proof that they refer such cases with pain in the ear or in the pre-auricular region directly to an otolaryngologist without considering a potential possibility of a TMD.

It is essential for a clinician dealing with the TMJ and its disorders to understand the influence of the para-functional habits, status of the dentition and influence of the muscles associated with the TMJ. Understanding the synchrony of the joint movement with the other components of the

stomatognathic system along with the balance in the joint movement and movement of the disc, is also vital. Any interference in one of the above-mentioned components can significantly affect the form and function of the temporomandibular joint. An appropriate training and experience is mandated to deal with the problems associated with this joint [1, 2].

This book gives a detailed insight into the various temporomandibular joint disorders, clinical and radiographic evaluation methods and management of various conditions affecting the joint. This is a complete book proving a detailed practically achievable clinical care required for the patients diagnosed with TMDs.

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## References

1. Dimitroulis G. Temporomandibular disorders: a clinical update. *BMJ*. 1998;317(7152):190–4.
2. Dimitroulis G. Management of temporomandibular joint disorders: a surgeon's perspective. *Aust Dent J*. 2018;63(Suppl 1):S79–90.