

Temporomandibular Joint Disorders: Is there a Need for Additional Subspecialty in Dentistry?

Sir,

The human upper body comprising of the shoulder girdle, head, and neck are innate components of the craniomandibular segment. In this manner, temporomandibular joint (TMJ), muscles, ligaments, facial circulation, and neural structures are closely interconnected.¹ This is the reason why neuromuscular, masticatory and postural problems are difficult to differentiate and evaluate separately. The complexity of the problem underlines the need for distinct and unique expertise in TMJ syndromes' management, because soothing the pain is a short-term goal while treating the root cause to avoid its re-occurrence is the long-term goal. Dr Bernard, a renowned scientist in early 1970s, used instruments to diagnose TMJ and occlusal discrepancies that work on bioelectric principles, which he later identified as neuromuscular dentistry.² A statement by American Association for Dental Research (AADR) on March 3, 2010, changed the game stating "Neuromuscular dentistry is NOT a specialty recognised by the American Dental Association."³

The TMJ disorders are multifaceted, involving para-functioning or hyperfunctioning of masticatory muscles, hormonal effects, neuromuscular dysfunction, articular disturbances, and TMJ structures. Patient with TMJ syndromes usually presents with TMJ pain, headache, cervical pain, restricted mouth opening, and paresthesia of tongue tip. Other complaints include ear congestions, postural difficulties, Bell's palsy, neuralgia of trigeminal nerve, insomnia, vertigo and atypical facial pain.⁴ The signs and symptoms of TMJ syndrome raise the suspicion of neurologic involvement. It is already an established fact that the human brain receives 80% of its input from cranial nerves and only 20% from the spinal cord. While considering cranial nerves, the fifth cranial nerve trigeminal, contributes to about 56 to 70% of brain input. Therefore, trigeminal nerve is of great significance in orofacial and TMJ disorders. It supplies most of the masticatory system, including muscles, paranasal sinuses, TMJ, and teeth, reflecting its neuromuscular involvement and correlation with TMDs.⁵

This amalgamation of signs and symptoms of neuromuscular and TMJ disorders pinpoints the need for treating TMJ syndrome as a separate entity under a subspecialty of neuromuscular dentistry. But there is still a lot of research needed to change the AADR statement as cited above. They think that working as TMJ specialists under the umbrella of neuromuscular dentistry is somehow based on beliefs that is not backed up by enough research to this date.

CONFLICT OF INTEREST:

The authors declared no conflict of interest.

AUTHORS' CONTRIBUTION:

SA: Substantial contribution to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work and drafting the work or revising it critically for important intellectual content.

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Sohaib Arshad¹, Raja Azman Awang² and Samreen Malik²

¹Periodontics Unit, School of Dental Sciences, Health Campus, Universiti Sains Malaysia, Kubang Kerian, 16150 Kota Bharu, Kelantan, Malaysia

²Department of Oral & Maxillofacial Surgery, Dow University of Health Sciences, Karachi, Pakistan

Correspondence to: Dr. Sohaib Arshad, Periodontics Unit, School of Dental Sciences, Health Campus, Universiti Sains Malaysia, Kubang Kerian, 16150 Kota Bharu, Kelantan, Malaysia.

E-mail: ehab_arshad@hotmail.com

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