Residents’ Corner

Temporomandibular Joint Disorders and Facial Pain in the Pediatric Population

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What exactly is TMD? How does it impact children and adolescents differently than adults? TMD has loosely been associated with a myriad of conditions from mild to debilitating pain, and can be accompanied by an altered range of motion. The location of the pain can span the face and anterior regions of the head in the trigeminal nerve distribution. This pain can dramatically impact the day-to-day function and quality of life of our patients. Although TMD is an important concept to understand, we need to recognize that defining these conditions purely based on their location as temporomandibular joint disorders (TMD) is not sufficient in the selection of the appropriate treatment modality. We, as practitioners, can be more effective if we shift our diagnosis from the site of the pain to the source of the pain (ie differentiating between the muscular, intra-articular, headache, neuropathic and other sources).

Many practitioners, as well as patients, view this disorder in only the adult population; however, this is equally important in the pediatric population. In a recent systematic review article published in the *Journal of Oral Rehabilitation*, the prevalence of TMD among 10-19 year olds ranged from 7.3 percent to 30.4 percent, with the two most cited symptoms as myofascial pain and anterior disc displacement with reduction. Given the prevalence, it is critical for pediatric dentists to conduct a thorough extraoral and intraoral examination that includes the facial musculature, joints and ligaments.

Dr. Nojan Bakhtiari, D.D.S., F.A.A.O.P., is a board-certified orofacial pain and TMD specialist who treats both the adult and pediatric population in New York City. When Bakhtiari was faculty at the UConn School of Dental Medicine, he was asked to lead the orofacial pain service for the pediatric dentistry department. This service grew rapidly, indicating that there was an unmet need for pediatric patients. His pediatric residents learned that systematic disorders can mimic TMD, and learned the importance of a thorough physical examination and history. For example, patients with juvenile idiopathic arthritis can present with sudden pain in the temporomandibular joint, lack of range of motion and shifts in occlusion. While self-care (warm/cold compresses, NSAIDs, and a soft diet) are warranted in most TMD conditions, this particular constellation of symptoms and suspicion of JIA calls for more specific interdisciplinary interventions and management. It is important for the pediatric dentist to screen and recognize when to refer to the pediatrician for a rheumatological panel (like ANA, Rh factor, ESR and ACPA) and to a pediatric rheumatologist for management.

It is also important for pediatric dentists to learn how to manage long-term follow-up for patients sustaining dentoalveolar trauma as it relates to the temporomandibular joints, mandibular growth and jaw dysfunction. Unilateral and bilateral intracapsular or subcondylar fractures are the most common mandibular fractures in children, according to the AAPD Recommendations on Acquired Temporomandibular Disorders in Infants, Children, and Adolescents. While a patient might fall on their chin and not sustain a condylar fracture, Dr. Bakhtiari stresses that “the physical force of the injury can still adversely impact the jaw’s growth center.” He urges that patients should be monitored by their pediatric dentist for asymmetrical jaw growth (unilateral hypoplasia) and mobility even in the absence of pain. At the earliest onset of signs of asymmetry, the patient should be referred to a team consisting of an orofacial pain specialist, an orthodontist and an oral surgeon.

Lastly, the pediatric dentist should be cognizant that the management strategies for pediatric patients may differ from those of adults. Bakhtiari states that while “occlusal guards might be beneficial to relieve musculoskeletal pain in adults, a guard in the pediatric population can alter or impede the growth of a rapidly developing system.” Therefore, if a dentist decides to fabricate an occlusal guard for a pediatric patient, it should only be used on a short-term basis (two to four weeks maximum) to allow for normal development to occur. Other treatment modalities, such as muscle trigger point injections, joint injections with or without steroids, short-term muscle relaxants, other medications, and physical therapy may be better management strategies.

Given the prevalence of TMD in the pediatric population, pediatric dentists play an important role in screening, managing and delivering care. Pediatric dentists play a critical part in the follow-up care and monitoring of TMD and facial pain patients as they transition into adulthood. As pediatric practitioners, we should be able to stratify mild, moderate and complex TMD and facial pain conditions, and know when it is indicated to properly refer to an orofacial pain specialist and other medical specialists. With a team-based approach to care and targeted interventions, patients will be able to benefit from pain relief, improved jaw function and jaw health.


About the Author

Dr. Jessica M. Baron is a first year pediatric dental resident at Montefiore Medical Center in the Bronx, N.Y. She grew up in Charleston, S.C., and completed her undergraduate education from Duke University in 2010 with a B.A. in Public Policy and minor in Art History. She graduated from the James B. Edwards College of Dental Medicine at the Medical University of South Carolina in 2015. She has earned a general practice residency certificate from Yale-New Haven Hospital and a dental oncology certificate from Memorial Sloan Kettering Cancer Center.