Tooth Grinding (Bruxism) in Pediatric Patients

Bruxism is the involuntary clenching and grinding of the teeth. Although it is often asymptomatic, frequent bruxism may become clinically significant when it interferes with sleep or results in tooth wear or jaw discomfort. Bruxism can occur while awake or asleep. The cause is multifactorial and reported complications include dental attrition, headaches, TMJ issues, and soreness of the chewing muscles.

Common symptoms believed to contribute to childhood bruxism are loosening of the teeth, tooth decay, headaches, TMJ pain, tooth sensitivities, airway issues (enlarged tonsils, Pediatric Obstructive Sleep Apnea-sometimes manifested by snoring and/or mouth breathing), stress and anxiety, and certain medications (largely stimulants). Bruxism occurs with increased frequency in patients with certain neurologic and psychiatric disorders, including Down syndrome, Rett syndrome, cerebral palsy, and attention deficit hyperactivity disorder (ADHD).

Evidence suggests that juvenile bruxism is a self-limiting condition that does not usually progress to adulthood bruxism (**approximately ⅓ of all children grind their teeth, however only 6-8% of adults grind**). Pediatric bruxism persisting into adulthood may be the product of unresolved airway issues, tooth misalignment, stress and anxiety and/or continued use of certain medications. Bruxism seems to affect both males and females at similar rates.

Bruxism can have detrimental effects on the teeth, including damage to teeth and dental work, thermal sensitivity in teeth, and hypermobility (excessive wiggliness in a tooth that should not otherwise be wiggly). Tooth wear is seen on tooth surfaces that contact during biting or chewing. In severe cases, bruxism can lead to injury of soft tissues of the mouth, dental fractures, muscle pain and spasms, TMJ and head and neck pain.

When treatment is recommended, the options for bruxism management can include patient/parent education, addressing airway issues (possible referral to ENT specialist), mouthguards/occlusal splints, orthodontic intervention (braces to reposition adult teeth), and psychological techniques. Because of the many changes that occur with respect to growth and development in growing children, most interventions are not recommended until the pediatric patient is transitioning/has transitioned to complete adult dentition (as early as age 9-12).