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ULTRASONOGRAPHIC EVALUATION OF THE MASSETER MUSCLE BEFORE AND AFTER BOTULINUM TOXIN INJECTION IN PATIENTS WITH BRUXISM.

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Background: Bruxism is defined as a diurnal or nocturnal parafunctional activity of the masticatory muscles, with a prevalence of 20% and an impact of life quality. It is characterized by the compression and/or grinding of the teeth without purpose. In cases where conventional therapies are insufficient, botulinum toxin type A can be used as an alternative therapeutic treatment for patients who present masticatory muscle hyperfunction.

Objective(s): The purpose of this case series was to assess the masseter muscles before and after injection of botulinum toxin type A by using ultrasonography.

Study Design: Ethical approval and patient consent were obtained. Botulinum toxin injection was performed on 4 patients with bruxism. Masseter muscles on both sides were assessed before and 1 month after injection by using ACUSON S 2000 (Siemens, Munich, Germany) with a 9-18 MHz linear probe. Maximum width, height, and volume measurements of the masseter muscles were obtained, along with elastography and virtual touch IQ elastography measurements in both rest and contraction positions.

Results: Measurements obtained from the patients before and after injection at rest position showed a decrease of 10% and 3% in masseter muscle width and volume, respectively. Measurements obtained from the masseter muscles before and after injection at contraction position again showed a decrease of 20% and 3% in muscle width and volume, respectively. According to virtual touch IQ elastography values, approximately 20% reduction was found at both positions. However, we were unable to reveal any constant variation before and after injection at both positions in consideration of height and elastography.

Discussion/Conclusions: Certain measurements of the masseter muscle with ultrasonography before and after botulinum type A injection in patients with bruxism may provide useful information in the follow-up process. Further research is essential, with more patients evaluated at different follow-up intervals.

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UNCOMMON FORM OF ECTODERMAL DYSPLASIA: TRICHO-DENTO-OSSEOUS SYNDROME.

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Background: Tricho-dento-osseous syndrome (TDOS) is an autosomal dominant genetic disorder, which is characterized by inherited defects in tissues that arise from epithelial−mesenchymal interaction. The minimal diagnostic criteria for TDOS include enamel hypoplasia, posterior taurodonts, autosomal dominant inheritance pattern, tightly curly hair at birth, and/or radiographic evidence of bone sclerosis. Some authors have questioned whether amelogenesis imperfecta of the hypomaturation−hypoplasia type with taurodontism (AIHHT) and TDOS are distinct conditions or denote a spectrum of the same disease.

Objective(s): The aim of this study was to increase awareness of TDOS.

Results: A 25-year-old female patient was seeking restorative treatment for the yellowish-brown discoloration of her teeth. Clinical evaluation revealed that she had multiple missing teeth, discolored teeth, frontal bossing, and a concave profile. She was otherwise healthy and not taking any medications. Her medical history indicated a previous diagnosis of ectodermal dysplasia (ED). Panoramic radiography and cone beam computed tomography (CBCT) revealed multiple missing and impacted teeth, as well as retained primary teeth. Reduction in enamel thickness on deciduous and permanent teeth was observed, in addition to taurodont appearance of second permanent molars. Generalized homogeneous ground-glass trabecular pattern in the maxilla and the mandible with a square shape of mandible was noted.

Discussion/Conclusions: In this report, we describe an unusual phenotype of ED, which represents a group of inherited conditions in which 2 or more ectodermally derived anatomic structures fail to develop. TDOS is an uncommon form of ED. The dental findings are clinically similar between TDOS and AIHHT; however, patients with AIHHT lack changes in their hair and bone. In cases where hair, bone, and nail changes are not significant, genetic analysis may help in differential