

Temporomandibular joint involvement in children with juvenile idiopathic arthritis: *A single tertiary-center experience*

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ABSTRACT

Background: Juvenile idiopathic arthritis (JIA) is the most common inflammatory arthritis in childhood. Temporomandibular joint (TMJ) involvement varies based on the JIA subtype. TMJ arthritis is one of the least diagnosed conditions and can lead to permanent functional and cosmetic complications. The objectives of this study are to describe the clinical and laboratory characteristic, state the treatment and outcome of patients with JIA, and explain TMJ involvement as observed in a large tertiary center.

Methods: A retrospective cross-sectional study of children diagnosed with JIA was assessed at King Abdullah Specialist Children's Hospital, Riyadh, Saudi Arabia (2015-2019), which included a descriptive analysis of children who had TMJ involvement among our cohort in this 5-year period of the study.

Results: We reviewed 123 cases with different JIA subtypes (57% females and 43% males). The most frequent subtype is the oligoarticular (36%). TMJ involvement was found in 16% (n = 20/123) of the patients, of whom 45% had Polyarticular JIA. The rheumatoid factor was positive in 25%; antinuclear antibody (ANA) in 45% and none showed positivity to HLAB27. Treatment resulted in complete resolution in 95% of cases, while Micrognathia and obstructive sleep apnea were the complications reported in 5% of cases.

Conclusion: TMJ involvement in JIA is not uncommon. Females with polyarticular disease were more frequently affected with TMJ arthritis. Positive ANA could be a risk factor for TMJ

involvement, while positive HLAB27 might have some protective effects. Therefore, early treatment for TMJ arthritis is essential to avoid possible complications.