

Poster presentation

## Temporomandibular joint involvement in children with juvenile idiopathic arthritis

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### Background

Temporomandibular joint (TMJ) arthritis can lead to severe mandibular growth disturbances in children with juvenile idiopathic arthritis (JIA). The study aim was to determine the rate of TMJ involvement in our JIA patients and find factors associated with TMJ arthritis.

### Materials and methods

Retrospective chart review of all JIA patients. Clinical criteria of TMJ arthritis included: presence of mandibular asymmetry, retrognathia, reduced maximal mouth opening (< 40 mm), asymmetric mouth opening and/or tenderness of the TMJ. Radiologic criteria (orthopantogramm and/or MRI) were synovial membrane and/or bone contrast enhancement, and/or destruction of the mandibular head.

### Results

After a mean follow up time of 3.95 years 81/226 patients had developed TMJ arthritis. The rate differed among JIA subtypes ( $p = 0.0016$ ) with 61% in extended oligoarticular, 50% in polyarticular RF negative, 40% in psoriatic, 36% in systemic, 33% in polyarticular RF positive, 30% in persistent oligoarticular, 16% in ERA and 11% in unclassified JIA. Risk factors included: female sex ( $p = 0.02$ ), younger age at onset of JIA ( $p = 0.016$ ), a higher mean number of active joints at each visit ( $p = 0.033$ ) and involvement of joints of the upper extremity ( $p < 0.0001$ ). Uveitis, ANA or RF positivity, ESR or CRP were not corre-

lated with TMJ involvement. HLA B27 had a statistically significant inverse correlation with TMJ involvement ( $p = 0.011$ ).

### Conclusion

The rate of TMJ involvement was 36%. Girls, patients with polyarticular joint involvement, with younger age at onset and with involvement of upper extremity joints had a higher risk for TMJ arthritis. Presence of HLA B27 seemed to be protective.