

Prevalence of Temporomandibular Disorder in Children and Adolescents with Juvenile Idiopathic Arthritis – Preliminary Data from a Norwegian Multicenter Study

J. Fischer^{1,2}, L. von Wangenheim Marti^{1,2}, E. Grut Gil^{1,2}, M. Slåttilid Skeie¹, K. Tylleskär⁴, L. Cetrelli⁵, J. Halbig⁶, P. Stoustrup⁷, K. D. Kristensen⁷, K. Rosendahl³, A. Rosen¹
¹Department of Clinical Dentistry, ² Oral Health Centre of Expertise in Western Norway (TkWest-Hordaland), Norway; ³Department of Clinical Medicine, University of Bergen, Bergen; ⁴ Department of Pediatrics, Haukeland University Hospital, Bergen; ⁵Public Dental Service Competence Centre of Middle-Norway (TkMN), Trondheim; ⁶Public Dental Service Competence Centre of Northern-Norway (TkNN); ⁷Section of Orthodontics, Faculty of Health Sciences, Aarhus University, Denmark

Johannes.Fischer@uib.no

Aims

To evaluate whether children and adolescents with juvenile idiopathic arthritis (JIA) have a higher prevalence of temporomandibular disorder (TMD) and temporomandibular joint disease (TMJD) than their healthy peers.

Material and Methods

This is an ongoing, longitudinal multicenter study (from Bergen, Tromsø and Trondheim, Norway) including 222 children and adolescents aged 4-18 years, diagnosed with JIA and compared to age and sex matched controls. All had a clinical examination according to TMD and TMJD as part of an extensive oral health examination.

Calibrated examiners (n=5) performed the examinations according to a standardized protocol including a modified version of DC/TMD and a shortened version of the EuroTMJoint Recommendations for Clinical TMJ assessment in patients diagnosed with JIA.

The presence of self-reported main complaints were assessed, both related to opening-, lateral- and protrusive movements and palpation of masticatory muscles and joints. The study was approved by the Regional Ethics Committee (2012/542/REK vest). We here report on preliminary findings from one of the centers (Bergen).

Results

72 patients (32 girls, 44.4 %) and 72 controls (32 girls, 44.4 %) residing in Bergen and its surroundings were included. There were no differences in mean age, sex between the two groups (Table1).

	Patients (JIA) n=72	Controls n=72	P-value
Age (mean, SD)	12.5 (SD 3.1)	14.5 (SD 2.3)	0.166
TMD as assessed by palpation (girls, %)	22 (13, 59%)	6 (1, 16.7%)	0.001
Selfreported TMD-related pain (girls, %)	20 (12, 60%)	6 (4, 66.7%)	0.004

Table 1. Age, sex and numbers of children with TMD for the two groups.

22 of the children with JIA vs six of the controls had TMD related pain as assessed by palpation (Table 1). Distribution of TMD by age is given in Fig. 1 and 2. Distribution of TMD related pain by area is given in Fig. 3.

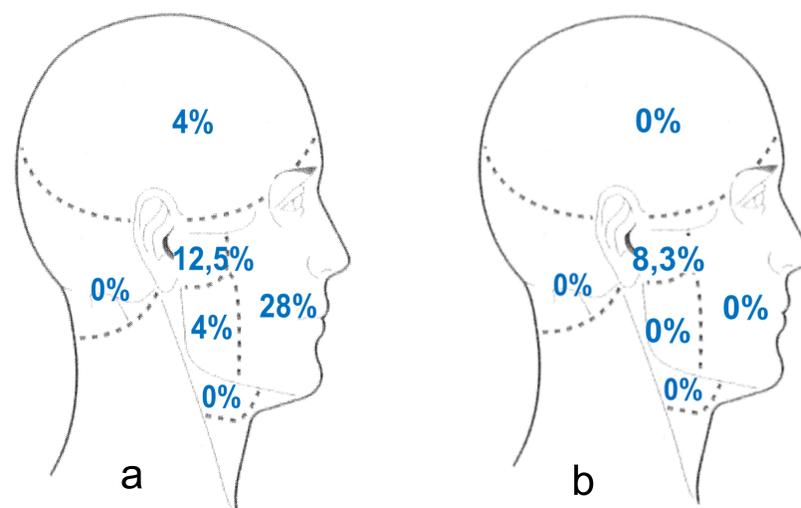


Fig. 3 Distribution of TMD related pain by palpation for a) cases and b) controls.

Distribution of TMD related Pain by palpation

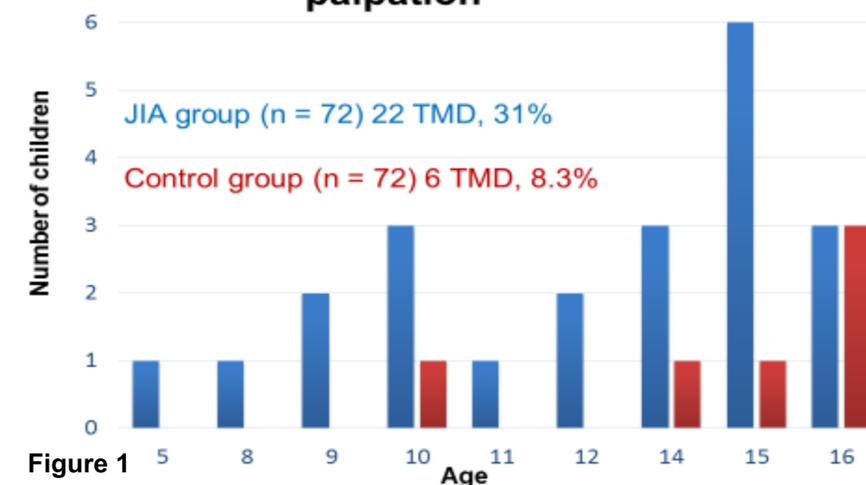


Figure 1

Distribution of selfreported TMD related pain

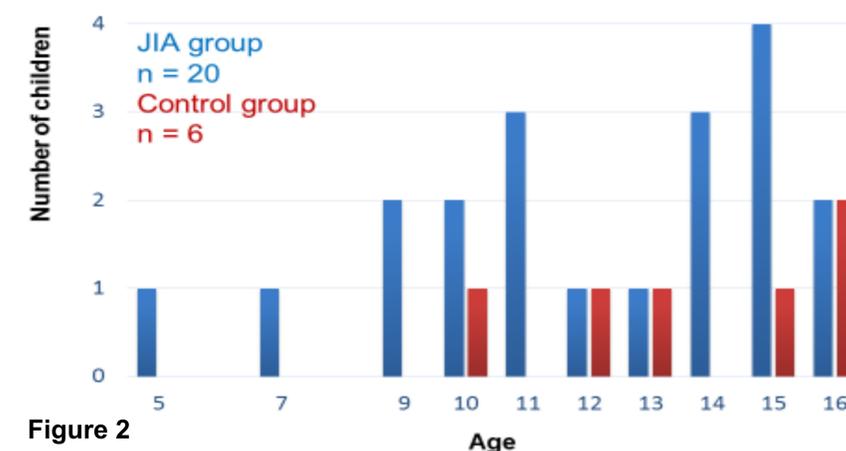


Figure 2

Conclusions

Children and adolescents with JIA have a higher prevalence of TMD, both assessed clinically and by self-reporting, than their healthy peers. Around one-third of the cases revealed TMD related pain symptoms by palpation, and more than one-fourth experienced self-reported TMD related pain.