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Prevalence of Temporomandibular Disorder in Children and Adolescents with Juvenile Idiopathic Arthritis – A Norwegian Multicenter Study

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Aims

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

Material and Methods

This is an ongoing, longitudinal multicenter study (Bergen, Tromsø and Trondheim, Norway) including 221 children and adolescents, aged 4-18 years, diagnosed with JIA and compared to age and sex matched controls. All clinical TMD assessment procedures were standardized and based on a shortened version of “Axis I Clinical Examination for DC/TMD” and on a shortened version of a self-assessment questionnaire, “The Euro^{TM}Joint Recommendations for Clinical TMJ assessment in patients diagnosed with JIA”. The examination was performed by five calibrated dentists.

The presence of self-reported TMD related pain were assessed, both related to opening-, lateral- and protrusive movements and due to palpation of masticatory muscles and joints. The study was approved by the Regional Ethics Committee (2012/542/REK vest).

Results

221 patients and matched controls residing in Bergen, Tromsø and Trondheim were included (table 1).

Table 1	Patients (JIA) n=221	Controls n=221	ρ value
Age (mean, SD)	**12.0 (SD 3.1)**	**12.0 (SD 2.3)**	**0.980**
Gender	**132 girls (60%)**		
Vertical incisal mouth opening (unassisted) Mean mm (range)	**46.2 (24-72)**	**49.0 (30-77)**	**<0.001**
Distribution of painful TMD			
TMD as assessed by palpation (girls, %)	**111 (75, 34)**	**62 (39, 18)**	**<0.001**
Selfreported painful TMD during jaw movements (girls, %)	**112 (67, 31)**	**59 (34, 16)**	**<0.001**
Selfreported painful TMD within the last 30 days (girls, %)	**59 (44, 20)**	**10 (8, 4)**	**<0.001**

Distribution of TMD concerning masticatory muscels and TMJ is given in Fig. 1, and selfreported symptoms in Fig. 2. Distribution of TMD related pain by area is given in Fig. 3.

Conclusions

Children and adolescents with JIA have a higher prevalence of TMJ symptoms and TMD than their healthy peers. Half of the cases revealed TMD related pain symptoms by palpation, and a bit of more than half self-reported TMD related pain during jaw movements. Pain and functional disturbances were dominating in females, both among JIA patients and healthy individuals.

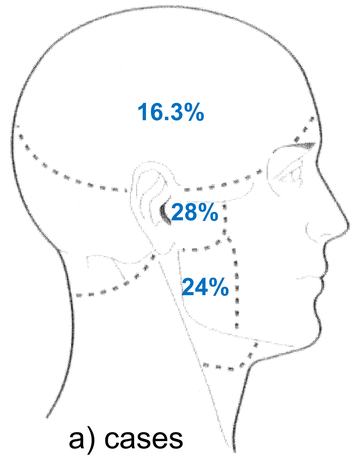


Figure 3
Distribution of TMD related pain by palpation

Figure 1

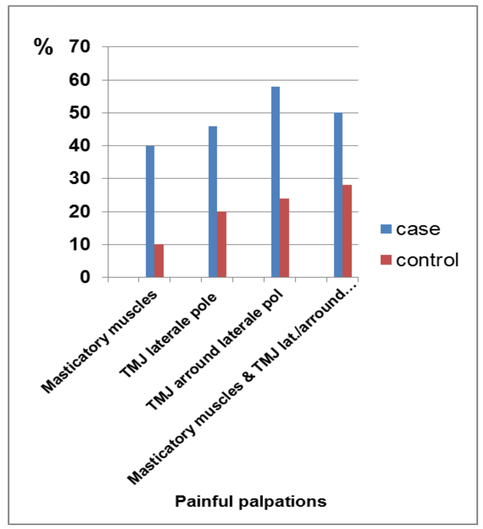
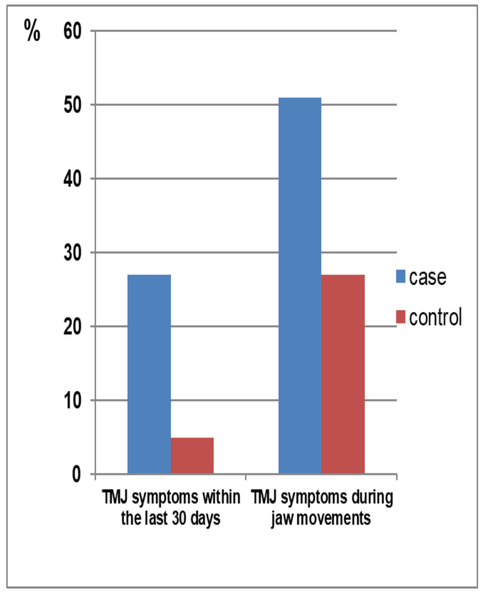


Figure 2



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