



POSTER PRESENTATION

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# Evaluation of disease activity in a population of Russian JIA patients

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## Background

The estimation of activity of disease in JIA patients is difficult, and the instruments of an estimation borrowed from adult rheumatology aren't much useful for JIA patients.

## Objectives

To assess the correlation between disease activity scores, using the Juvenile Arthritis Disease Activity Score (JADAS), Disease activity score 28 (DAS 28) and Physician's assessment of disease activity by VAS (PhGloVAS) on a cohort of JIA patients including in the cross-sectional epidemiological study in Russian Federation (RUS).

## Methods

During 3-months cross-sectional study in 30 centers of RUS the data of 1099 consecutive patients were collected. The following key determinants of disease activity were examined: numbers of tender, swollen joints; number of active joint and joints with patient assessment of pain and global health scores (VAS); ESR; DAS 28; JADAS-71, PhGloVAS. Relationship between studied variables was investigated using of a nonparametric method of Spearman's correlation analysis.

## Results

There were 1099 patients with a mean age of  $10.51 \pm 4.54$  years and the female/male ratio was 1.6. The distributions of JIA patients according to ILAR categories were as follows: systemic 122 (11.1%), oligoarticular 483 (43.94%), RF positive polyarthritis 81 (7.37%), RF negative polyarthritis 350 (31.84%), enthesitis-related 45 (4.09%), psoriatic 18(1.63%). The median disease

duration was  $4.5 \pm 3.85$  years. The mean value of JADAS-71 score was  $13.04 \pm 10.46$  (95% CI 0.618), the mean value of DAS-28 score was  $3.13 \pm 1.46$  (95% CI 0.08) and mean value PhGloVAS scales was  $37 \pm 24$  (95% CI 1.0). The JADAS-71 correlated with PhGloVAS ( $r=0.8$ ,  $p<0.05$ ) and DAS 28 ( $r=0.79$ ,  $p<0.05$ ). Patients have been distributed on groups according to degree of activity depending on index DAS 28. In group with remission (DAS 28<2.6) were 445 patients (40.49%), with low activity (DAS 28 2.6-3.2) were 208 patients (18.93%), with moderate activity (DAS 28 3.2-5.1) were 343 patients (31.21%), with high activity (DAS 28 >5.1) were 103 patients (9.37%). In each group the correlation between JADAS, DAS 28 was defined. The strongest relationship was determined in patients with high activity ( $r=0.79-0.68$ ,  $p<0.02$ ), and the poor relationship was in group with low activity ( $r=0.79-0.21$ ,  $p<0.0001$ ). In this group ( $n= 208$ ) percent of the tendered and swelled joints which are not considered in an index DAS 28, were 51,1% and 40,87% respectively. The greatest percent of not considered involved joints was in group of patients with a sJIA (68.9% tender joints and 71.23% swelled). Hip, talocrural, and temporal-mandibular joints often enough are involved at this diagnosis (18.03%, 44.26%, 2.46% respectively in our analysis) and define functional insufficiency. As a whole, on all cohort of patients the poor relationship between DAS and JADAS is at patients with enthesitis-related arthritis ( $r=0.79-0.63$ ,  $p<0.036$ ).

## Conclusion

JADAS and DAS 28 demonstrated strong correlation at a high degree of activity and poor correlation at a low degree of activity. Joints of the bottom extremities and others aren't considered in index DAS 28, but make appreciable percent from total number of the involved

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joints . DAS 28 it is applicable for an estimation of activity of disease not at all diagnoses JIA

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