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THU0596

MEASUREMENT OF SERUM CALPROTECTIN MRP8/14 IN PAEDIATRIC PATIENTS DIAGNOSED WITH JUVENILE IDIOPATHIC ARTHRITIS AND AUTOINFLAMMATORY DISEASES

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Background: There is evidence of the correlation between serum levels of calprotectin MRP8/14 and disease activity in Juvenile Idiopathic Arthritis (JIA), but the same correlation with other rheumatic diseases in children such as autoinflammatory diseases has not been studied as much.

Objectives: To analyse calprotectin MRP8/14 in serum of patients with juvenile idiopathic arthritis (JIA) and various autoinflammatory diseases with different degrees of activity. To check if there is a correlation between serum MRP8/14 and disease activity.

Methods: Study in two phases: 1) Initial, transversal, in JIA and/or autoinflammatory disease patients, determining serum MRP8/14 (by ELISA test) and collecting clinical data: number of active joints, Visual Analogue Scale parents/patients (VASp), VAS physician (VASph); and analytical: C-Reactive Protein (CRP) and white cells blood count (WBC) (among others). 2) Second prospective phase, repeating the same analysis 3–6 months later. Disease activity was assessed by Juvenile Arthritis Disease Activity Score (JADAS) in AIJ; and by VASp, VASph and CRP in autoinflammatory diseases.

Results: The sample included 90 patients (25 males) between the ages of 1 and 21 years (median 11.1); 61 diagnosed with JIA (excluding systemic category), and 29 with different autoinflammatory diseases (including systemic JIA). 69 patients (20 males, with median age 11.2, 48 AIJ, 21 autoinflammatory) participated in the prospective phase. The main results are shown in table 1.

MRP=myeloid related proteins. JADAS=Juvenile arthritis disease activity score. ACJ=active joints count. VASm=visual analogue scale–physician. VASp=visual analogue scale–parents/patient. CRP=C reactive Protein.

Conclusions: In patients with non-systemic JIA, a positive correlation was found between serum MRP8/14 and JADAS, VASph, VASp, CRP, WBC, neutrophilia and (inversely) haemoglobin.

In autoinflammatory diseases positive correlation has been found with VASm, CRP, leukocytosis, neutrophilia, thrombocytosis and (inversely) haemoglobin. MRP8/14 seems to behave as a marker of activity in both JIA and autoinflammatory diseases, although with a stronger association in the latter.

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PULMONARY MANIFESTATIONS IN MIXED CONNECTIVE TISSUE DISEASE WITH JUVENILE AND ADULT ONSET – ARE THERE ANY DIFFERENCES?

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Background: Mixed connective tissue disease (MCTD) presents in childhood in 7%–23% of cases, but there is limited knowledge about the comparability of juvenile and adult onset of the disease. A common and serious manifestation is interstitial lung disease (ILD), possibly more common in adult MCTD according to a retrospective report.¹

Objectives: To compare disease variables in juvenile and adult onset MCTD, particularly regarding pulmonary manifestations, after long-term follow-up.

Methods: Two cohorts consisting of, respectively, 52 patients with juvenile onset MCTD and 90 patients with adult onset MCTD from all regions of Norway were compared. Inclusion criteria were fulfilment of the Kasukawa- or the Alarcon-Segovia criteria. Patients with onset of symptoms before the age of 18 years were considered to have juvenile onset. All patients were clinically examined, including high resolution CT and pulmonary function tests.

Results: Mean age at examination was 28.0 (SD 10.3) in juvenile onset, and 54.3 (SD 13.0) in adult onset MCTD (p<0.001). Age at disease onset was 14.4 (SD4.4) and 37.9 (SD 15.1) years, respectively. Patient and disease characteristics are shown in table 1.

	Juvenile onset	Adult onset	p-value
Male gender, n (%)	8 (15)	28 (24)	0.192
Disease duration from symptom onset, mean (SD)	16.2 (10.3)	17.0 (8.9)	0.766
Anti-RNP levels, median (IQR)	180 (36.0–240.0)	44.0 (7.0–237.0)	0.002
ESR, median (IQR)	8.0 (5.0 to 16.0)	11.0 (7.0–18.5)	0.048
CRP, median (IQR)	0.7 (0.5–2.5)	2.0 (0.7–4.9)	<0.001
ILD, n (%)	14 (27)	39 (43)	0.051
ILD% of TLV, median (IQR)	4.0 (1.0–8.3)	5.0 (1.8–20.0)	0.258
ILD in >20% of TLV, n (%)	1 (2)	10 (11)	0.048
DLCO% pred, mean (SD)	73.0 (12.5)	72.0 (19.4)	0.598
FVC% pred, mean (SD)	89.2 (14.7)	89.2 (20.8)	0.711
FEV1% pred, mean (SD)	89.4 (13.7)	81.2 (20.0)	0.016

Juvenile patients had higher levels of anti-RNP, but lower ESR and CRP compared to adult onset patients. ILD was found in 27% of juvenile and 43% of adult patients (p=0.051), and more adult onset patients had ILD in >20% of total lung volume (TLV). Adult onset patients had lower forced expiratory volume in 1 s (FEV1), but similar diffusing capacity (DLCO) and forced vital capacity (FVC) as the juvenile patients.

Conclusions: ILD tended to be more frequent in patients with adult onset MCTD than in those with juvenile onset, although not statistically significant. More patients with adult onset had affection of >20% of TLV. Juvenile and adult patients

	JIA (n=61)		Autoinflammatory diseases (n=29)	
	1 st determination (n=61)	2nd determination (n=48)	1 st determination (n=29)	2nd determination (n=21)
JADAS	r=0.270* p=0.035	r=0.054 p=0.717		
ACJ	r=0.053 p=0.685	r=0.042 p=0.779		
VASph	r=0.308* p=0.016	r=0.041 p=0.784	r=0.304 p=0.108	r=0.622** p=0.003
VASp	r=0.329* p=0.010	r=-0.023 p=0.877	r=0.341 p=0.082	r=0.341 p=0.141
CRP	r=0.212 p=0.107	r=0.349* p=0.018	r=0.579** p=0.001	r=0.102 p=0.688
WBC	r=0.296* p=0.022	r=-0.071 p=0.633	r=0.749** p=0.000	r=0.693** p=0.000
Neutrophiles	r=0.389* p=0.002	r=0.421** p=0.002	r=0.281 p=0.140	r=0.710** p=0.000
Haemoglobin	r=-0.255* p=0.049	r=-0.023 p=0.828	r=-0.454* p=0.013	r=-0.552** p=0.009
Platelets	r=-0.033 p=0.802	r=0.001 p=0.993	r=0.659** p=0.000	r=0.208 p=0.366