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POS1295

PERFORMANCE OF 2019 EULAR/ACR CLASSIFICATION CRITERIA FOR SYSTEMIC LUPUS ERYTHEMATOSUS IN A PEDIATRIC POPULATION – A MULTICENTER STUDY

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Background: The "European League Against Rheumatism" and "American College of Rheumatology" 2019 (EULAR/ACR-19) criteria for the diagnosis of Systemic Lupus Erythematosus (SLE) were recently published, with the stated goal of maintaining the level of sensitivity and raising the level of specificity for classification of SLE in adults.

Objectives: We aimed to examine the function of the new EULAR/ACR-19 criteria in a population of children and compare them to the SLICC-12 and ACR-97 criteria.

Methods: In this multicenter study the charts of jSLE patients from three tertiary medical centers were reviewed and compared to patients with non-jSLE diagnosis. Pediatric rheumatologists, blinded to the original diagnosis, reviewed and diagnosed all cases. Pediatric patients' clinical and laboratory data were retrospectively extracted and then examined with regard to how they met the new and old criteria.

Results: Included were 225 patients (112 jSLE, 113 non-SLE). When applied to juvenile SLE classification, the sensitivity of the new EULAR/ACR-19 criteria was 0.96 (0.9–0.99) and the specificity was 0.89 (0.82–0.94). These were comparable to the Systemic Lupus International Collaborating Clinics (SLICC) criteria. The sensitivity of the EULAR/ACR-19 criteria improves over time and was 0.83 twelve months following disease onset, reaching 0.96 after longer than 24 months.

Conclusion: Among a cohort of jSLE patients, sensitivity of the new EULAR/ACR-19 criteria was found to be high and specificity may have improved slightly compared to the SLICC-12 criteria. We support the use of the new classification criteria for pediatric patients in future jSLE studies, but it should be noted that its specificity is lower than for adults.

	ACR-97	SLICC-12	EULAR/ACR-19
Sensitivity (95% CI)	0.79 (0.70-0.86)	0.96 (0.9-0.99)	0.96 (0.9-0.99)
Specificity (95% CI)	0.94 (0.88-0.97)	0.85 (0.77-0.91)	0.89 (0.82-0.94)
Accuracy (95% CI)	0.86 (0.81-0.9)	0.9 (0.86-0.94)	0.92 (0.88-0.96)
Positive Likelihood Ratio (95% CI)	12.7(6.1-26.2)	6.35(4.1-9.9)	9.0 (5.3-15.4)
Negative Likelihood Ratio (95% CI)	0.23(0.16-0.33)	0.05(0.02-0.12)	0.05(0.02-0.12)
Diagnostic odds ratio (95% CI)	55.5(22.80-135.0)	120.85(43.0-340.0)	180.1(61.3-529.4)

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POS1296

JIA PATIENTS DO NOT HAVE MORE OSTEOPOROSIS THAN HEALTHY AGE AND SEX-MATCHED CONTROLS BUT LOWER BONE MASS DENSITY IS FOUND AT TOTAL HIP AND CORTICAL COMPARTMENT

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Background: Achievement of a normal peak bone mass is an especially important consideration in young adults with juvenile idiopathic arthritis (JIA), because interference with attainment of peak bone mass may not be repaired later in life. It has been suggested that children with JIA cortical appendicular skeletal bone is more affected by disease activity than axial trabecular bone. To evaluate bone mineral density (BMD) DXA measurements are widely used. Although, DXA is limited to two-dimensional evaluation of integral BMD and cannot differentiate between trabecular and cortical bone compartments. Alternatively, 3D-DXA analysis is a new method based on DXA scans of proximal femur that provides accurate estimates of trabecular and cortical volumetric BMD.

Objectives: The aim of the study was to analyze the trabecular and cortical bone using 3D-DXA in young adults with JIA compared to age-matched healthy controls.

Methods: This cross-sectional study was aimed to analyze the differences in 3D-DXA proximal femur compartments. The patients were recruited from the specialized transitional unit of the Vall d'Hebron University Hospital. JIA patients older than 18 yo without previous bisphosphonates intake were included. Age and sex-matched healthy controls were selected. DXA scans (Lunar Prodigy, General Electric Medical Systems, v.15) were acquired. OP was defined according to the WHO criteria. The 3D-DXA software was used to assess in 3D the trabecular density and cortical thickness from DXA scans as reported previously

[1]. The 3D-DXA and DXA measurements were compared using Student's *t* test. Categorical variables were compared using Chi-squared test. All hypothesis tests with *p* value lower than 5% were considered significant.

Results: Forty-six patients and 46 age and sex-matched controls were evaluated. The mean time of disease's duration was 7.37 years, and the most frequent JIA subtype was Oligoarticular ANA positive. More than 21% of the patients had an active disease. OP was present in 5 patients and 1 control. Despite not finding significant differences in the prevalence of osteoporosis, JIA patients had lower aBMD at total hip by DXA and lower cortical sBMD by 3D-DXA than controls (Table 1).

Table 1. Comparison of DXA and 3D-DXA measurements between JIA and healthy controls

Variable	JIA patients (n=46)	Healthy controls (n=46)	<i>P</i> value
DXA			
Lumbar aBMD (g/cm ²), mean ± sd	1.097 ± 0.02	1.155 ± 0.02	0.042
Right femoral neck aBMD (g/cm ²), mean ± sd	0.930 ± 0.02	1.014 ± 0.01	0.041
Right total hip aBMD (g/cm ²), mean ± sd	0.932 ± 0.02	1.001 ± 0.01	0.008
Lumbar T-score, mean ± sd	-0.716 ± 0.16	-0.212 ± 0.16	0.037
Right femoral neck T-score, mean ± sd	-0.563 ± 0.17	0.087 ± 0.12	0.036
Right total hip T-score, mean ± sd	-0.721 ± 0.18	-0.12 ± 0.13	0.008
3D-DXA			
Trabecular vBMD (mg/cm ³), mean ± sd	180.44 ± 5.54	194.57 ± 5.11	0.064
Cortical sBMD (mg/cm ³), mean ± sd	147.23 ± 3.41	161.52 ± 2.89	0.002
Osteoporosis (WHO definition)			
Yes, n (%)	5 (10.87)	1 (2.17)	0.091
No, n (%)	41 (89.13)	45 (97.83)	

DXA dual-energy X-ray absorptiometry, *sd* standard deviation, *aBMD* areal bone mineral density, 3D-DXA three-dimensional dual-energy X-ray absorptiometry, *vBMD* volumetric bone mineral density, *sBMD* superficial cortical bone mineral density

Conclusion: JIA patients do not have more OP than controls in our cohort but there are differences in BMD in the different locations and greater involvement of the cortical bone in JIA.

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POS1297

HOW HLA B27 PREVALENCE IN THE POPULATION INFLUENCE ON FEATURES OF JUVENILE IDIOPATHIC ARTHRITIS: DATA FROM SAKHA REPUBLIC (YAKUTIA)

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Background: Sakha Republic (Yakutia) - SR(Y) is a bid arctic region of Russia with high proportion of aboriginals - Yakutians (50%), intra-national marriages, increased level of inbreeding and high distribution of HLAB27 among aboriginals - 33%, according the epidemiological studies. The main type of arthritis is ankylosing spondylitis in adults and enthesitis-related arthritis (ERA) of juvenile idiopathic arthritis (JIA) in children. The pattern of arthritis distribution in adults and children in SR(Y) is differ from Caucasians and similar to Native Americans.

Objectives: Our study aimed to evaluate the features of JIA in aboriginals of SR(Y), associated with high prevalence of HLAB27 antigen.

Methods: In the retrospective study we included 144 Yakutians who were admitted in the rheumatology department of Yakutsk in 2007-2016 years and 753 JIA patients Caucasian origin in Saint-Petersburg in the same years. We evaluated routine clinical and laboratorial features. HLA B27 was evaluated according the clinical judgement of the attending physicians.

Results: ERA is a main JIA category in Yakutians. The main features the male predominance, higher onset age, high inflammatory activity, lower number of active joints, high incidence of hip and sacroiliac joints involvement, lower levels of psoriasis and uveitis. Yakutians have rare the involvement of cervical spine (6% vs 14%, *p*=0.0000001), TMJ (1% vs 6%, *p*=0.027), elbow (8% vs 16%, *p*=0.012), wrist (18% vs 28%, *p*=0.017), MCP (7% vs 21%, *p*=0.00005), PIP (8% vs 25%, *p*=0.00005). The treatment rates of methotrexate and biologics were similar between groups, but

in Yakutians the biologics were administered earlier, because methotrexate failed and often was ineffective. The cumulative probability to receive biologics was higher in Yakutians compare to Caucasians: HR=3.4 [2.6; 4.4], *p*=0.000001 (Figure 1). The main biologic in Yakutians was etanercept (49/70; 70%). Yakutians received corticosteroids and cyclosporine A rarely, due to low incidence of systemic onset JIA and oligoarthritis with uveitis. It was observed, that the HLA B27 as a risk factors had different significance in Yakutians and Caucasians. HLA B27 presence increased the risk of ERA OR=2.72 (1.3; 5.6) *p*=0.01 in Yakutians and OR=69.2 (29.5; 162.3), *p*=0.00001 for Caucasians; for biologic administration: 0.86 (0.4; 1.8), *p*=0.529 and 2.45 (1.5; 4.0), *p*=0.0003, respectively.

Figure 1. Cumulative probability to leave without biologics between Yakutian and Caucasian JIA patients.

Conclusion: High distribution of HLA B27 antigene in Yakutians, lead to different pattern of JIA categories distributions and patient's management.

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Table 1. Differences between Yakutian and Caucasian JIA patients.

JIA features	Yakutians, n=144 (%)	Caucasians, n=723 (%)	<i>p</i>
Gender, boys, n (%)	85 (59.0)	279 (38.6)	0.000006
Onset age, years	10.6 (6.0; 13.4)	6.0 (3.0; 10.3)	0.0000001
JIA categories, n (%)			
Oligoarthritis	36 (25.0)	188 (26.0)	0.0000001
Poly, RF (-)	21 (14.6)	248 (34.3)	
Poly, RF (+)	1 (0.7)	22 (3.0)	
Systemic onset	4 (2.8)	53 (7.3)	
ERA	76 (52.8)	171 (23.7)	
Psoriatic arthritis	6 (4.2)	41 (5.7)	
Active joints	4.0 (3.0; 6.0)	6.0 (3.0; 12.0)	0.0000001
Uveitis, n (%)	16 (11.1)	114/503 (22.7)	0.002
Psoriasis, n (%)	3/143 (2.1)	46/719 (6.4)	0.043
Hip involvement	50 (34.7)	146 (20.2)	0.0001
Sacroiliitis	46 (31.9)	69 (9.6)	0.0000001
HLA B27, n (%)	76/131 (58.0)	105/301 (34.8)	0.00001
ANA, n (%)	4/46 (8.7)	204/444 (46.0)	0.00001
RF, n (%)	3/141 (2.1)	22/403 (5.5)	0.104
Biologics, primary, n (%)	70/144 (48.6)	347 (48.0)	0.892
Time before first biologics, years	0.6 (0.3; 1.4)	2.6 (1.0; 5.4)	0.0000001

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POS1298

COMPARISON OF FMF CLINICAL FEATURES BETWEEN TURKISH AND CRIMEAN TATAR CHILDREN

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