pain at biting, chewing and yawning and moreover mandibular growth can be impaired and facial asymmetries may develop. Although Magnetic Resonance Imaging (MRI) is the gold standard to identify TMJ involvement, it is affected by lack of informations about bone components. Cone beam CT (CBCT), an imagine diagnostic tool with minimal xray exposure, thanks to its 3D studies provides an accurate image of anatomical bone alteration.

Objectives: Provide a screening imaging tool for TMJ involvement in JIA patients so TMJ dysfunction can be detected and managed at an early stage.

Methods: Eighteen patients affected by JIA from 2 to 16 years of age were included in this prospective study (M/F, 3/15); they were all admitted to a Pediatric Rheumatology and Maxillofacial Surgery Integrated out-patient ambulatory, where an experienced surgeon focused on evaluation of TMJs. All symptomatic patients (uni or bilateral TMJ's pain) performed MRI: anomalous imaging such as increased joint enhancement or intra-articular effusion, was treated with intra-articular corticosteroid injections (IACI). After about two month from intra-articular treatment CBCT was performed in all the enrolled patients (symptomatic and not).

Results: CBCT is a useful tool to improve the diagnostic and therapeutic iter of TMJ involvement in JIA; in fact on one hand it highlights the unsuccessful and palliative role of IACI and on the other hand it can reveal significant impairment of the joint bone components in frequent asymptomatic patients; systemic therapy from the early phase of TMJ involvement could prevents the irreversible modification of the mandibular growth process of undertreated inflammation

Conclusion: CBCT is a useful tool to improve the diagnostic and therapeutic iter of TMJ involvement in JIA; in fact on one hand it highlights the unsuccessful and palliative role of IACI and on the other hand it can reveal significant impairment of the joint bone components in frequent asymptomatic patients; systemic therapy from the early phase of TMJ involvement could prevents the irreversible modification of the mandibular growth process of undertreated inflammation.

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AB1019

THE EFFECT OF TREATMENT REGIMEN ON HEALTH-RELATED QUALITY OF LIFE AND FUNCTIONING IN CHILDREN WITH UVEITIS

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Background: Pediatric non-infectious uveitis can lead to ocular complications and blindness. Complex treatment regimens are often needed and consist of frequent topical treatments (glucocorticoids, mydriatics, glaucoma medications) and systemic immunosuppression.

Objectives: To examine the impact of topical and systemic treatment on health-related quality of life (HRQOL), mental health, and uveitis-related quality of life (QOL) of children with uveitis.

Methods: We reviewed records of 40 children with uveitis (22 JIA-associated uveitis (JIA-U), 18 other uveitis types). Parents and patients completed questionnaires on general QOL (Pediatric Quality of Life Inventory-PedsQL), depression and anxiety (Revised Children's Anxiety and Depression Scale- RCADS), physical functioning (Childhood Health Assessment Questionnaire- CHAQ), and visual function and uveitis-related QOL (Effect of Youngsters' Eyesight on QOL-EYE-Q). We used ANOVA and T-Test to compare treatment groups: 1) topical only vs. systemic only vs. combined topical and systemic treatment; 2) topical vs. no topical treatment.

Results: Of 40 children most were non-Hispanic (98%), Caucasian (80%), and female (70%). Most had bilateral (73%), anterior disease (83%), with minimal disease activity (93% inactive uveitis) and normal vision (100% visual acuity 20/40 or better).

When comparing by treatment group, there were worse EYE-Q Parent and Child uveitis-related QOL scores among the children of the topical treatment only group compared to those on systemic treatment only or the combined treatment group, however they were not statistically significant. (Parent: 1.57 vs. 1.83 vs. 1.6, p=0.13)(Child: 1.68 vs. 1.9 vs. 1.7, p=0.20).

However, when comparing children by use of topical treatment, children on topical treatment had worse EYE-Q total scores compared to those who were not on topical treatment for Parent reports (1.75 vs. 1.93, p=0.01) (Table 1). They also had worse EYE-Q visual function scores (1.82 vs. 1.96, p=0.02) and uveitis-related QOL scores (1.59 vs. 1.83, p=0.04). For child reports, EYE-Q total score and subscores were lower in the topical treatment group but were not statistically significant.

Children with uveitis had similar Parent and Child reports of PedsQL, RCADS, and CHAQ regardless of treatment group.

Table 1. Vision-Specific Outcome Measures by Treatment Regimen in Children with Uveitis

Measure	No Topical Rx (n =11)	Topical Rx (n = 24)	P Value
EYE-Q Parent Total	1.93 (0.07)	1.75 (0.26)	0.006*
Visual Function	1.96 (0.06)	1.82 (0.26)	0.021*
Uveitis-related QOL	1.83 (0.19)	1.59 (0.33)	0.041*
EYE-Q Child Total	1.87 (0.18)	1.71 (0.3)	0.12
Visual Function	1.86 (0.23)	1.73 (0.34)	0.254
Uveitis-related QOL	1.9 (0.19)	1.69 (0.34)	0.07

*p<0.05

Conclusion: The parents of children with uveitis who need topical treatments as part of their therapy regimen report worse uveitis-related QOL. This is likely secondary to parental responsibility for instilling topical therapy. Additionally, visual function scores were also lower in the topical treatment group and could reflect disease activity or use of mydriatics which can affect vision. Other measures including the PedsQL, CHAQ, and RCADS did not appreciate differences based on treatment regimen. Our findings demonstrate the importance of including uveitis-specific disease measures in the assessment of the impact of uveitis. The burden of medication use, specifically eye drops, that can sting, require frequent application, or affect vision, needs further study as this can affect medication adherence and patient outcomes.

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AB1020

DISEASE ACTIVITY INDEX IS ASSOCIATED WITH SUBCLINICAL ATHEROSCLEROSIS IN CHILDHOOD-ONSET SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Systemic lupus erythematosus (SLE) is considered an independent risk factor for cardiovascular events in association with traditional risk factors. Therefore, it is important to recognize and to identify the specific risk factors for atherosclerotic disease in these patients for the prevention and early treatment of cardiovascular diseases, aiming to provide a better quality of life with long-term morbidity reduction.

Objectives: To determine the prevalence of subclinical atherosclerosis by the measurement of carotid intima-media thickness (CMT) in patients with childhood-onset systemic lupus erythematosus (cSLE) younger than 21 years. To check for associations between sex, age, race, body mass

index, medications in use, cumulative dose of corticosteroid, traditional and nontraditional risk factors for atherosclerosis, laboratory tests, including plasma cytokine levels, clinical disease activity score (SLE Disease Activity Index - SLEDAI-2K) and cumulative damage index (Cumulative Organ Damage of the SLE International Collaborating Clinics - SLICC/ACR damage index) with CIMT.

Methods: This was a cross-sectional study. Clinical and laboratory data were collected based on chart review and laboratory testing; present clinical and nutritional evaluation were performed during interviews and CIMT was evaluated by ultrasound carried out by an expert radiologist. Associations were estimated using univariate analysis (Fisher and Wilcoxon-Mann-Whitney tests) and multivariate analysis (linear and log binomial regression).

Results: Twenty-eight patients, aged 13.9 ± 3 years, were enrolled in the study. The prevalence of subclinical atherosclerosis was 32.14% (95% CI: 14.8, 49.4) and the mean carotid intima-media thickness (CIMT) was 0.43 ± 0.035 mm. Most common traditional risk factors observed were dyslipidemia in 89.3%; uncontrolled hypertension in 66.6%; overweight or obesity in 32% and poor diet in 78.6%. Nontraditional risk factors observed were duration of disease of 2.4 ± 2.12 years; mean SLEDAI-2K of 7.8 ± 6.0 ; SLICC/ACR damage index scored ≥ 1 in 25%; high levels of ultra-sensitive C-reactive protein in 25% and nephritis and neuropsychiatric involvement in 75% and 28.5% of the patients, respectively. Cumulative dose of corticosteroids was 0.48 ± 0.83 mg/kg/day and 60.7% of patients were using immunosuppressive drugs. Univariate analysis showed that uncontrolled hypertension, proteinuria, estimated glomerular filtration rate < 75 ml/min/1.73 m² and SLEDAI-2K > 5 were associated with subclinical atherosclerosis. The association of CIMT with SLEDAI-2K > 5 was maintained after adjusting for control variables (cumulative corticosteroid dose, duration of disease, levels of cholesterol fractions, hypertension and renal disease).

Conclusion: This study demonstrated that subclinical atherosclerosis was frequently observed in cSLE, mainly in patients with moderate to severe activity disease (SLEDAI-2K greater than 5)

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AB1021 CURRENT COURSE OF JUVENILE ARTHRITIS AND ASSESSMENT OF PHYSICAL DEVELOPMENT OF CHILDREN

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Background: Appointment of modern methods of treatment led to a modification of the course of juvenile idiopathic arthritis (JIA). In Ukraine, the basic preparations were prescribed at JIA since 1984, then the biological registered only in 2011

Objectives: To evaluate the effect of treatment changes on activity indicators, functional disorders and physical development of patients with JIA.

Methods: retrospective analysis of medical records of 67 patients in 2018 and compared with the data of the clinical registry of the department in 1997-2010 (231 children). The diagnosis of JIA is based on the PRIMO criteria, the evaluation of the activity was performed for JADAS27, the JADI functional disturbances, the linear growth delay was estimated for SD, the BMI calculation using the Kettl formula was performed.

Results: The analysis showed that the structure of sub-variants of JIA during the 20 yrs. did not significantly change (10.6% sJIA, 31.9% oJIA, 8.5% RF+pJIA, 29.8% RF-pJIA, 12.8% of the eA). Compared to the historical control group, there was a decrease in the total no. of affected joints, which increased with age (from 4.92 ± 0.7 in 1-6 yrs. to 7.7 ± 1.8 in adolescents now compared with 5.33 ± 0.8 & 14.3 ± 1.02 in the past). The max. no. of injured joints was at RF+pJIA (17.0 ± 2.9), and 38.3% of the limbs were deformed. In recent years, JIA did not show visceral lesions (12.8% in past). JADAS27 was generally low, the max. for sJIA 7.1 ± 5.0 , eA 6.7 ± 0.79 , and RF-pJIA 6.5 ± 1.04 . The greater activity of the disease was observed on average in children aged 10-14 y, 5.8 ± 0.9 (3.3 ± 0.9 at 6-10 & 5.0 ± 1.3 in 1-6 y). The race was the best in oJIA: an acceptable state of symptoms was 27%, a lack of activity of 27%, while with pJIA in 40% - high activity of the disease. Indicator JADAS27 did not significantly depend on serological features: ANA+ 3.9 ± 0.6 ($r = -0.06$), RF+ 4.5 ± 1.0 ($r = -0.2$), HLA B27 7.2 ± 0.8 ($r = 0.05$), sero-neg. 4.9 ± 0.6 ($r = -0.6$). In cases of relapse or persistence of active inflammation in patients with ≥ 5 y, JADAS27 was lower when DMARDS was administered before 3 mo. from the debut of the disease (1.8 ± 1.2 vs. 3.5 ± 0.7). In patients with high disease activity, the combination of DMARDS and sCS was worse

in the first 6 mo. from the debut (JADAS 6.6 ± 1.2 - 5.5 ± 1.7) than DMARDS + ADA (4.0 ± 2.3 - 0.0) and DMARDS + TOCY (5.2 ± 1.2 - 3.6 ± 1.3). The max. JADI were in RF-pJIA (2.0 ± 1.3), in general, JADI increased with age (< 6 y 0.55 ± 0.3 ; > 10 y 1.7 ± 0.9). JADI didn't depend on the onset age ($r = -0.12$), disease duration ($r = 0.16$), ANA detection (1.8 ± 1.1 ; $r = 0.18$), the RF (1.2 ± 0.5 ; $r = 0.07$); HLA B27 0.5 ± 0.3 ($r = -0.1$); sero-negative (1.02 ± 0.4 ; $r = 0.07$). In patients last years of FI II-III cen. marked with a higher frequency of 35.9%. A smaller proportion of patients with growth retardation was observed than in previous yrs. (10.4 vs 49%). The delay in linear growth with JIA is -1.37 ± 0.06 SD now, the degree of growth retardation depends on the duration of the disease (up to 3y -1.2 ± 0.1 , 8-13y 1.6 ± 0.07) and the variant of the course (the max. growth retardation rate observed in sJIA (78% to -1.2 SD; 11% -3 SD). The DMARDS+sCS+TZ in high activity JIA and growth retardation was better for normalizing the growth (-0.94 ± 0.04 SD after 2y) compared to DMARDS +sCS+ADA (-1.3 ± 0.4). On average, BMI at JIA did not differ from the age norm (17.8 ± 0.7 ; 48% cases with overweight in last). DMARDS in higher doses was better for the normalization of BMI (MTX 15 mg/m² 17.1 ± 1.2 ; 10 mg/m² 19.2 ± 1.9). The use of ADA in patients with malnutrition resulted in 6 mo. to normalization of the BMI (18.55 ± 1.5) in contrast to the use of ETA (16.52 ± 0.1).

Conclusion: The results obtained show that the overall activity of JIA is significantly reduced today. Improvement of the course of JIA and the degree of functional impairment is explained by the introduction of modern methods of pathogenetic therapy into the clinical practice.

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AB1022 UVEITIS AND ANTI-DFS70 ANTIBODIES IN JUVENILE IDIOPATHIC ARTHRITIS: AN OBSERVATIONAL RETROSPECTIVE STUDY

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Background: Juvenile idiopathic arthritis (JIA) is the most common rheumatic disease in childhood and uveitis is one its major extra-articular manifestation. Children with JIA and a positive antinuclear antibodies (ANA) are known to be at risk to develop severe uveitis, which is usually asymptomatic and can lead to blindness if misdiagnosed. To date the finding of markers of uveitis is still a challenge. In adults anti-DFS70, ANA which have indirect immunofluorescence pattern described as dense fine speckles (DFS pattern) and bind a 70kDa protein in immunoblot or chemoluminescence, are reported to be a marker of otherwise healthy individuals among asymptomatic ANA positive patients (in the absence of anti-Extractable Nuclear Antigens antibodies). The role of anti-DFS70 in children is yet not established even though but it has also been reported with a remarkably high frequency in unhealthy children (localized scleroderma, juvenile dermatomyositis and uveitis); it has also been detected in 2.1% of healthy children.

Objectives: The aim of our observational study is to evaluate the correlation between uveitis and anti-DFS70 antibodies in children with JIA.

Methods: 36 paediatric patients (24 females, 12 males) affected by JIA admitted to the Rheumatology Unit of Verona were evaluated. For each patient the following data were analysed: JIA subtype, ANA positivity, anti-DFS positivity, presence of uveitis diagnosed by a pediatric ophthalmologist.

Results: In our series oligoarticular ANA + JIA was the predominant subtype (25 cases, 70% of total JIA cases), followed by oligoarticular ANA - subtype (6 cases, 16.5% of total), polyarticular ANA - subtype (3 cases, 8% of total) and polyarticular ANA + (2 cases, 5.5% of total). All 6 patients (16.5%), who developed mono- or bilateral uveitis, were affected by oligoarticular ANA + JIA and presented DFS ANA pattern, confirming the evidence that DFS ANA pattern is the most common pattern associated with uveitis. Only one patient presented anti-ENA antibodies encompassing anti-DFS70 positivity. None of the other five patients presented antibodies anti-DFS70, regardless of the clinical history of uveitis.

Conclusion: DSF ANA pattern remains the most common pattern seen in JIA patients and seems to be an hallmark of uveitis. In our series we found that neither JIA nor the risk of uveitis in JIA correlates with anti-DFS70 isolated positivity. The role of these antibodies in children remains unclear. Further studies are necessary to identify a reliable biomarker to