Methods: In this prospective study, we assessed a survey of 60 women under the age of 35 for back pain symptoms during the postpartum period from day 1 to 18 months. A structured questionnaire using Google form was used. Data from this survey were then correlated with gained weight and pregnancy outcome, as well as women's history of LBP.

Results: We interviewed 60 women during their post-partum period. The mean age was 27.9 years old [24, 35 years]. Women were on average at 9 months of post-partum [1, 18 months]. The median height was 1.6 meters [1.54-1.74m]. The median weight at the moment of the study was 63.2 kilograms [48-80kg]. Before pregnancy, body mass index was 23.5 Kg/m² [17-34 Kg/m²]. The total gained weight at the end of pregnancy was 14 kg [12-29 kg]. Only 20% gained more than 15kg. LBP was experienced in 35% of cases with a mean delay of 3.2 months post-partum [1-8 months]. The prevalence of persistent LBP was noted in 26% of cases. However, no correlation was found between LBP and gained weight ($p=0.07$). Sixty five percent reported one or more significant episodes of back pain during their pregnancy. Significantly, more patients suffering from pain in pregnancy had history of previous back pain episodes when not pregnant ($p<0.001$), as well as during previous pregnancies ($p<0.001$).

Conclusion: No correlation was found between gained weight and occurrence of LBP. The main factors associated with the development of back pain were previous episodes of back pain while non-pregnant or pregnant.

Disclosure of Interests: None declared

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Paediatric rheumatology

AB0970 THE RELATION BETWEEN CONGENITAL STRUCTURAL MALFORMATIONS, DISC-VERTEBRA DEGENERATION AND DISC HERNIATION IN THE PEDIATRIC AGE GROUP

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Background: Disc/vertebral degeneration and disc herniation are rare causes of low back pain in childhood. Their relationship with congenital anomalies were reviewed in few studies in literature (1-3).

Objectives: To examine the relation between congenital structural malformations in the lumbar spine, early degeneration and lumbar disc herniation in pediatric age group patients with low back pain, and to determine the incidence of congenital structural malformations, disc/vertebral degeneration, and disc herniation.

Methods: Four hundred patients with LBP persisting for at least six weeks were included in the study. Demographic characteristics, physical examination findings, and laboratory and imaging results were recorded for all patients. Severity of pain was determined using a visual analog scale (VAS). Lumbar X-rays were examined for the presence of lumbosacral transitional vertebrae (LSTV) and spina bifida occulta (SBO). The incidence of disc/vertebral degeneration and disc herniation was investigated at the L4-5 and L5-S1 level in lumbosacral magnetic resonance imaging of patients with and without congenital malformation (LSTV-SBO).

Results: The study population consisted of 219 girls and 181 boys aged 10-17 years (mean age 14.9±1.9). Presentation symptoms were low back pain in 90.5% ($n=362$), and low back-leg pain in 9.5% ($n=38$). The mean VAS score was 5.3±1.0. LSTV was determined in 67 (16.8%) patients and SBO in 62 (15.5%). Disc herniation was determined in 68 patients, at the L4-5 level in 26.5% ($n=18$), at the L5-S1 level in 48.5% ($n=33$), and at both levels in 25% ($n=17$). Vertebral degeneration was present at the L4-5 level in 14 (8.6%) patients and at the L5-S1 level in 39 (23.9%), while disc degeneration was present at the L4-5 level in 21 (12.8%) patients and at the L5-S1 level in 31 (19.0%). No significant difference was observed in the incidence of disc/vertebral degeneration and disc herniation in patients with congenital malformation. Disc herniation was significantly more common in patients with disc degeneration ($p=0.003$, $p<0.001$). Congenital malformations were not observed in approximately 80% of patients without disc herniation and disc/vertebral degeneration.

Conclusion: The presence of congenital malformations does not appear to represent a risk factor for early degeneration and disc herniation in pediatric age group. Congenital malformations, early degeneration, and disc herniation may constitute an underlying pathology in pediatric patients with persistent low back pain.

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AB0971 LONG-TERM EFFICACY AND SAFETY OF CANAKINUMAB IN PATIENTS WITH SYSTEMIC JUVENILE IDIOPATHIC ARTHRITIS: RESULTS FROM A SINGLE-CENTER STUDY

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Background: Results from various phase 3 clinical studies have demonstrated the efficacy of canakinumab to treat patients with systemic juvenile idiopathic arthritis (sJIA). However, limited information is available on the long-term efficacy and safety of this drug to treat children with sJIA.

Objectives: To evaluate the long-term efficacy and safety of canakinumab in patients with sJIA treated at the National Medical Research Center of Children's Health, Moscow, Russia.

Methods: This was a prospective, single-center study that included canakinumab (CAN)-naïve patients diagnosed with sJIA following the International League of Associations for Rheumatology (ILAR) criteria and start receiving CAN treatment from 10/2012 to 03/2016. Patients included in this study also participated, for defined periods of time, in the clinical trial NCT02296424. Patients with active disease started treatment with canakinumab 4 mg/kg. A treat-to-target approach was used, canakinumab was discontinued in patients on clinical remission, either following the NCT02296424 protocol or by investigator's decision, and re-introduced in those patients who experienced a relapse afterwards. Disease characteristics and demographics were recorded at the time of diagnosis and initiation of treatment (study entry). Disease activity was evaluated periodically using the adapted JIA ACR core set measures, and percentages of patients with inactive disease and on clinical remission were calculated using the sJIA ACR criteria. Response to treatment was also evaluated by calculating modified ACR responses and JADAS-71 scores. Safety was assessed by collecting and classifying adverse events (AEs) at each visit.

Results: Nineteen patients presenting with sJIA were included in this study, with a median age at treatment initiation of 9.6 (interquartile range, IQR 6.4-11.1) years and a median disease duration of 4.4 (IQR 1.2-7.0) years. Most patients (17/19) had been treated previously with one or more biologic agents for sJIA. As of 23 December of 2019, the median time of follow up was 55.5 (47-71.7) months, with all patients being followed for at least 3.5 years and 5 patients followed for more than 7 years. As it is shown in figure 1, most patients (16/19) were on clinical remission one year after starting therapy, and this effect was sustained at year 3.5 (17/19). ACR 90 responses were observed in 84.2% (16/19) patients at one year and 94.7% (18/19) patients at 3.5 years, whereas JADAS-71 scores decreased from 15 (14: 28.5) at baseline to 0 (0: 0) at one year with 4/19 patients maintained with JADAS-71 >0; at 3.5 years, only one patient had JADAS-71 >0 (0.47, due to slight ESR increasing). Concerning the 5 patients with >7 years of follow up, three of them were in clinical remission for more than 3 years, including one who had discontinued therapy more than 2 years. Another patient had a relapse after attempting drug discontinuation, but recovered clinical remission after reintroducing canakinumab, and remained in this state for the last two years. The remaining patient has persistent low levels of disease activity during the last four years of follow up. AEs required hospitalization were reported in 36.8% (7/19) patients.

Conclusion: Sustained clinical remission was observed in most patients with sJIA treated with canakinumab for up to 7 years, with no new or unexpected adverse events reported.

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AB0972

DEVELOPMENT OF THE PARENT VERSION OF THE JUVENILE ARTHRITIS DISEASE ACTIVITY SCORE CUT-OFFS FOR MODERATE AND HIGH DISEASE ACTIVITY STATES IN JUVENILE IDIOPATHIC ARTHRITIS IN A LARGE MULTINATIONAL PATIENT SAMPLE

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Background: Measurement of disease activity level is of pivotal importance in the care of patients with juvenile idiopathic arthritis (JIA). According to the most recent requirements, both, parent's and children's perception should be taken into account while evaluating the disease course and assessing effectiveness of therapy. Therefore, a new disease activity evaluation tool, based only on parent assessment of the outcome, is under development and named Parent Juvenile Arthritis Disease Activity Score (parJADAS) [1].

Objectives: The aim of this study is to develop the parJADAS cut-off values of moderate disease activity (MDA) and high disease activity (HDA) in JIA patients.

Methods: The parJADAS (score range 0-40) is the sum of 4 values: 1) parent's assessment of disease activity on a 21-numbered circle 0-10 VAS; 2) assessment of pain intensity on a 21-numbered circle 0-10 VAS; 3) proxy assessment of joint disease up to a maximum of 10 joints; 4) assessment of morning stiffness (MS) on a Likert scale, ranging from no MS (0 points) to > 2 hours of MS (10 points). The study dataset is composed of 2,412 patients with JIA, seen in 3389 visits with parJADAS available, enrolled in the the multinational registry PharmaChild, assessing the long-term safety of treatment of children with JIA. At each visit, subjects were subjectively rated as being in inactive disease, low disease activity, MDA, or HDA by the attending physician. For each patient, only one visit per disease state was retained.

To identify the cut-offs the following methods were implemented: 1) Mapping: the 25th percentile value of the parJADAS in patients having MDA or HDA, respectively, was calculated; 2) Youden Index: Youden Index (J) identifies the maximum potential effectiveness of the biomarker through the receiver operating characteristic (ROC) curve analysis; 3) Max agreement: The analysis of agreement was based on kappa statistics, which assesses the agreement beyond chance between 2 dichotomous ratings. The first rating was obtained using all possible parJADAS values as hypothetical test criteria; to obtain the second rating, the categorical ratings of each attending physician were dichotomized and were coded as 0 or 1.

Results: Preliminary cut-off values for parJADAS with sensitivity and specificity are presented in the table.

	25th centile	Youden Index	Kappa	Mean	Sensitivity	Specificity	AUC
MDA	6	5	9	7	73.4	82.0	0.853
HDA	14.8	11	18.5	15	71.2	87.6	0.892

Conclusion: Tentative cut-off values for classifying the states of MDA and HAD using parJADAS were calculated. The obtained values will be tested in the validation analysis. Once validated the cut-offs are ideally suited to identify subjects at risk of disease flare when remotely monitored with the parJADAS.

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AB0973

THE IMPACT OF YOGA, ANTI-INFLAMMATORY DIET & SELF MONITORING IN CHILDREN WITH RHEUMATIC DISEASES

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Background: There is growing evidence of positive effects of yoga, special diet and an internet-based model of self-monitoring in adults with rheumatic diseases in various small scale independent studies. These studies have shown improvement in disease activity, symptom relief, quality of life, mental health issues and social life and thereby optimizing the disease management in a holistic way.

Objectives: The present study was designed to investigate the combined effects of yoga, anti-inflammatory diet and self monitoring in children with chronic rheumatic diseases.

Methods: In the clinical study, a total of 22 children aged more than 8 years with newly diagnosed rheumatic disease were enrolled. Depending on their consent, they were divided into two groups; 1) experimental group and 2) control group. Experimental and Control Group (n=22)

All 22 participants were advised every month follow up for the next 4 months. Baseline disease activity and damage scores were calculated for all.

Experimental Group (n=14) Three different printed materials were given.

1. Pictures of "Yoga Ashnas" with explanation in their understandable language
2. Pictures of foods under two headings: 1) beneficial and 2) harmful
3. Self monitoring kit: Disease and medicines information leaflets and simplified pictorial

version of disease specific monitoring and damage scores

- ✓ All 14 participants were enrolled to a single time yoga training session under a guidance of an experienced yoga teacher.
- ✓ All are advised 45 minutes yoga every day at home.
- ✓ All are put on strict diet chart.
- ✓ All should read the material and calculate their disease score/s every time before their next visit.

Table:

Table A: Characteristics	Experimental group (n=14)	Control group (n=8)
Median age	12.8 years	11.2 years
Males	5 (35.71%)	3 (37.5%)
Females	9 (64.28%)	5 (62.5)
Juvenile Systemic Lupus Erythematosus (JSLE)	2 (14.28%)	2 (25%)
Juvenile Dermatomyositis (JDM)	2 (14.28%)	1 (12.5%)
Juvenile systemic sclerosis (JSSc)	1 (7.14%)	2 (25%)
Mixed connective tissue disease (MCTD)	2 (14.28%)	0
Enthesitis related arthritis (ERA)	3 (21.42%)	1 (12.5%)
Polyarticular Juvenile Idiopathic Arthritis (PJIA)	4 (28.57%)	2 (25%)