substitutive dosage, the patient experienced Herpes Zoster virus reactivation (requiring prolonged antiviral treatment), followed by the reappearance of the inflammatory phenotype complicated by HLH with neurological involvement (irritability and lethargy), responsive to HD steroids and IG. A later cerebral MRI evidenced a small gliotic area in left Centrum Ovale. After steroids suspension, monthly HD IV IG administrations maintained clinical remission. Further immunological studies confirmed a reduction of NK cells with normal function. Hereditary HLH, Autoimmune Lympho-Proliferative Syndrome (ALPS) and main primary immunodeficiencies were ruled out. Given the clinical picture, a large NGS diagnostic panel (courtesy by K. Botzug, Vienna) for autoinflammatory diseases and immunodeficiencies was performed revealing the homozygous LEU141PRO ADA2 mutation, confirmed by Sanger analysis. Being this mutation novel, an ADA2 enzymatic activity test was performed revealing a complete loss of ADA2 activity. The parents refused anti-TNF treatment and the patient is still on monthly HD IG with a complete wellbeing after 3 years of follow-up.

Conclusion: The current report enlarges the clinical spectrum associated with DADA2 to a persistent unspecific inflammatory syndrome, complicated by HLH. This case further emphasizes the possibility that NGS could unravel unusual phenotypes of already known inflammatory syndromes. Even if further reports are required, the response to HD IG observed in the present case it is of interest. Even if anti-TNF is the treatment of choice HD IG could be a possible treatment in DADA2, especially during the acute phase.

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AB0975

INITIAL BIOLOGICAL THERAPY RESPONSE IN PATIENTS WITH SUSPECTED AUTOINFLAMMATORY DISEASE

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Background: The choice of the initial biological therapy for patients with suspected autoinflammatory diseases and not conclusive genetic test remains challenging.

Objectives: To assess the clinical response to the initial biological therapy in pediatric patients with suspected autoinflammatory disease with no genetic diagnosis.

Methods: We retrospectively reviewed the clinical charts of patients followed in our clinic who started empirical biological therapy after being diagnosed with suspected autoinflammatory disease(sAID) due to the intensity of their symptoms and no response to colchicin or FAMES. Next generation sequencing using an immune deficiency/dysregulation(115 genes) and autoinflammatory panel(12 genes) was negative/inconclusive in all patients.

	Mean	SD	Median	IQR	Min	Max
PCR max mg/L	199.4	134	181	190	39	440
VSG 1h max	89.7	29.6	86	32	44	140
Leukocytes/ul	25942	9950	25105	9450	11670	45200
Neutrophils/ul	16132	6692	16250	9450	6500	25300
Lymphocytes/ul	1518	1050	1275	1350	200	3300
Haemoglobin (g/dl)	9.6	2.1	10	2.75	6.2	12.8
Platelets/ul (max)	603375	225317	560000	198000	25000	100300
Platelets/ul (min)	182875	104840	160500	145000	74000	368000
Amyloid(mg/L)	Data in 5 patients: 1 patient 3.7 ; 2 patients >8					

Results: We identified 9 patients:6/9 were male, median age at fever onset 1.33 years old IQR(0.46-4), age at diagnosis of sAID 3.8 years old

IQR(1.75-7). Clinical presentation included fever(9/9), abdominal pain and arthromyalgia(7/9), aphthous(6/9), headache, rash and adenopathy(5/9), delayed growth(4/9), tonsillitis and pericarditis(3/9) as well as diarrhea and pleuritis(2/9). One patient presented with stroke, cutaneous lesions, vasculopathy and haemolytic uraemic syndrome and 1 patient with amyloidosis and secondary hepatosplenomegaly. None of the children suffered from uveitis or meningitis. The flares lasted a median of 14 days(IQR 8-20). Two patients had persistent symptoms. Their mean/median lab values are shown at table. 4/9 patients had homozygous mutations with uncertain significance, heterozygous mutations or polymorphism but their symptoms or familiar study was not suggestive of the corresponding AID. One patient had a heterozygous mutation in MEFV (p.P3696.p.R408q) and also a CECR1 heterozygous mutation with uncertain significance, one patient had p.R92Q heterozygous mutation in TNFRSF1A, one patient had MEFV p.R202Q homozygous mutation, other patient had a NOD-2 heterozygous mutation and the patient with amyloidosis had INO80 deficiency and a NOD2 mutation (p.A918D). All patients responded to steroid therapy; subsequently 8/9 received anti IL-1Receptor kineret as first biological therapy and 1/9 with suspected vasculopathy received anti-TNF. Response to IL-1R antagonist was complete in 3/8 and partial in 4/8 children;1/8 showed no response. 2/8 patients were switched to anti-TNF: One each to etanercept and Infliximab with good response. The patient with amyloidosis was changed to anti IL-6R with incomplete response but clear improvement compared to anti IL-1R response. The patient with suspected vasculopathy and initial anti-TNF treatment had partial response with no recurrent stroke but persistent skin lesions.

Conclusion: An important group of patients with sAID lack genetic confirmation. Empirical use of IL-1R antagonist is promising but not effective in all patients as it was observed in our case series,where 5/8 children showed partial or no response,3/5 needing a second biologic treatment in form of anti-TNF due to persistent moderate-severe symptoms.

A model to predict the response to different therapeutic strategies, based on clinical features and immunological profile (including inflammatory cytokines) might help to choose the most appropriate immunomodulatory treatment.

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AB0976

PSYCHIATRIC DISORDERSDURING TRANSITION CARE IN ADOLESCENTS WITH RHEUMATIC DISEASES

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Background: Chronic rheumatic diseases (CRD) have a strong impact on psychosocial development of pediatric patients. There are several factors associated with psychiatric disorders (PD) in these children; physical disability, complex treatments, long-term follow-up, and flares, are the most cited in literature.

Juvenile Idiopathic Arthritis (JIA) is the first cause of disability in children with CRD, on the other hand, Major Depressive Disorder (MDD) and Dysthymia are the third cause. Some PD, mostly MDD, appear as a consequence of disability caused by CRD, but immune pathways might be implicated in pathogenesis as well.

Adolescents with CRD need to transition to an adult-centered care while deal with emotional and physical changes. This implies a difficult situation in which patients could be in higher risk for develop PD. There are a lack of information on how this process affects emotional health in this population.

Objectives: The aim of the study is to calculate the prevalence of PD in adolescents with CRD during transitional care and their relationship with clinical and social factors.

Methods: Patients older than 16 years with an established CRD, who were in transitional care during the period between July 2017 and January 2019 were included in this transversal study.

We used MINI KID assessment tool to characterize PD in our patients. Each patient performs an interview with both a clinical psychologist and

a pediatric psychiatrist to confirm psychiatric/emotional diagnosis. Clinical, social and demographic data were collected from medical records. Descriptive statistics with frequencies or measures of central tendency and dispersion, depending on variable characteristics were used. Comparisons and correlations were performed with parametric and non-parametric tests as appropriate.

Results: Forty patients were recruited during study period, aged 18 (IQR 16 - 19) years old, 31 female, and most diagnosed with JIA (22, 55%) and Systemic Lupus Erythematosus (SLE, 7, 17.5%). Time since diagnosis were 5.5 (IQR 0.5 - 13) years and half of the patients presented with an active disease.

After psychiatric evaluations, 24 (60%) patients presented a PD, 7 (17.5%) were identified with MDD, while minor disorders (specific phobia and anxiety) were noticed in 11 (27.5%). Two patients presented alcohol dependence, and 11 (27.5%) were diagnosed with more than one PD.

PD were more frequently in patients with SLE (71%) and in those with active disease regardless of underlying diagnosis (54% vs 45%, $P = .490$). Other significant factors related with more prevalence of PD were female gender (66% vs 44%, $P < .001$), having a couple (90% vs 57%, $P < .001$), have a single parent (83% vs 60%, $P = .005$), and sex activity (71% vs 61%, $P = .002$).

Conclusion: We found a higher prevalence of PD in adolescents during transitional care, especially in those with active disease. It is priority to involve a multidisciplinary team to transition adolescents from pediatric to adulthood care to prevent and detect PD in this population.

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AB0977 ULTRASOUND MEASUREMENT OF JOINT CARTILAGE THICKNESS IN HEALTHY ASIAN SCHOOL-AGED CHILDREN

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Background: Degeneration of the osteocartilaginous structures due to synovial inflammatory process is a feature of juvenile idiopathic arthritis (JIA)¹. While anthropometry difference has been reported between Asian and Caucasian². Asian specific age- and gender-related normal standard reference values should be established before ultrasound (US) measurement of cartilage thickness (Cth) becomes standard procedure in the clinic.

Objectives: The standard cartilage thickness in Asian children population

Methods: A cross-sectional study was performed in 100 healthy Asian children (including 48 girls and 52 boys, age between 5 to 12 years-old). Bilateral knees, ankles, wrists, second metacarpophalangeals (MCPs) and proximal interphalangeals (PIPs) were measured using US. Children's body weight and body height were also recorded for later adjustment.

Results: We observed no difference in the Cth between right and left knees, ankles and wrists but MCPs and PIPs. Cartilage thickness in the large joints such as ankles and knees differed between sexes ($p < 0.001$), and the boys had thicker cartilage than those of the girls. Cartilage thickness decreases with increasing age after weight, height and BMI adjustment. A formula for calculating sex-specific cartilage thickness at different ages in childhood is suggested.

Conclusion: Cartilage thickness measurement with US in small joints may be biased. A standard reference of Cth for Asians in the knee, ankle and wrist joints between age 5- to 12 have been proposed.

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AB0978 NEUROLOGICAL MANIFESTATIONS OF PEDIATRIC SYSTEMIC LUPUS ERYTHEMATOSUS IN EGYPTIAN PATIENTS

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Background: SLE is a complex autoimmune disorder, characterized by multisystem involvement including the nervous system, juvenile onset SLE has more aggressive clinical course in comparison with adult-onset SLE.

Objectives: To study the neuropsychiatric manifestations of SLE in Egyptian children.

Methods: We reviewed the charts of all children and adolescents who were diagnosed with SLE and evidence of neuropsychiatric manifestations was defined by full neuropsychiatric history and examination.

Results: Out of 54 children with SLE, 30 (55.6%) had neuropsychiatric (NP) manifestations, the mean age at onset of the disease was 13.6 years. The mean period between onset of SLE and NP manifestations 15.5 months. NP manifestations was the presenting feature in 3 patients. Headache was the initial symptom of central nervous system (CNS) involvement in 35% of patients seizures was the most frequent CNS finding seen in 7(23.3%) patients, 6 (20%) patients had cognitive impairment, 6(20%) patient had cognitive impairment, 6(20%) patients had CVA, 2(6.7%) had chorea, 2(6.7%) had psychosis, 2(6.7%) had depression, 1 (3.3) had cerebritis, 1(3.3%) had peripheral neuropathy. Lupus anticoagulant was high in patients with chorea, seizures or cerebrovascular accidents (CVA). Electroencephalogram (EEG) was abnormal in 30% of patients presented by seizures and rarely helpful in patients with diffuse NP symptoms. Magnetic resonance imaging (MRI) was abnormal in 13 cases, long term outcome was good, 3 patients had significant persistent CNS deficits, the majority of patients (90%) had excellent recovery from neuropsychiatric SLE.

Conclusion: NPSLE is one of the most common serious complications of pediatric SLE, so early recognition and management are of paramount importance. CNS involvement was observed in 55% of our pediatric patients with SLE, 76% of whom developed symptoms during the first year of onset of the disease Headache and seizures were the most common neurological manifestations of pediatric SLE, followed by CVA and intellectual disability. Psychosis, depression and chorea were less frequent in our study group, while peripheral neuropathy and cerebritis were rare.

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