arthralgia was present in 5/8, parotitis in 4/8, oral symptoms in 4/8, rash in 4/8, fatigue in 3/8 and ocular symptoms in 2/8 patients. One patient developed calcinations on fingers. All patients had high titer of antinuclear antibodies, 7/8 were positive for anti-Ro and 5/8 for anti-La antibodies. Three patients were tested for rheumatoid factor and all were positive. 6/8 patients had elevated ESR and hypergammaglobulinemia. 4/8 patients had elevated serum amylase.

Biopsy of salivary glands was performed in 5 patients and foci of lymphocytic infiltration were shown in all of them. Further two patients had salivary gland changes on MRI and/or US. On ophthalmologic evaluation 3 patients had positive Schirmer test and one had unstable tear film. One patient had CNS vasculitis and two decreased diffusing capacity of the lungs. Other patients showed no signs of internal organ involvement. 4/8 patients were treated with NSAIDs, 7/8 patients with hydroxychloroquine, 2/8 also received corticosteroids and one patient MMF. At this point the patient with CNS vasculitis has stable changes on head MRI without clinical symptoms. Other patients have no signs of internal organ damage. Calcinations that appeared on fingers in one patient are not progressing.

Conclusion: Most common symptoms in our cohort were arthritis and/or arthralgia, parotitis, oral symptoms and rash. Half of the children presented with recurrent parotitis. One child developed calcinations on fingers, which have not yet been described in patients with SS. Pediatric SS differs from adult SS and specific pediatric diagnostic criteria would improve management of these patients.

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AB0945 CO-MORBID AFFECTATIONS FORMATION IN CHILDREN WITH SYSTEMIC LUPUS ERYTHEMATOSUS

Ljudmila Bohmat^{1,2}, Natalia Shevchenko^{1,3}, Irina Bessonova^{1,2}. ¹Institute of Children and Adolescents Health Care, Department of cardiorheumatology, Kharkiv, Ukraine; ²V.N. Karazin National University, Department of pediatrics, Kharkiv, Ukraine; ³V.N. Karazin National University, Department of pediatrics № 2, Kharkiv, Ukraine

Background: In children with systemic lupus erythematosus (SLE) due to the cascade of immune-inflammatory reactions there is a development of systemic vascular endothelium lesion, which causes not only clinical manifestations of the main process, but also leads to the damage of vital organs and systems, the development of metabolic disorders. Extensive damage aggravates more the course of the disease, worsens its prognosis, complicates the response to therapy and reduces the quality of life of patients.

Objectives: The aim of study was to determine the frequency and variants of comorbid conditions in children depending on the duration and activity of the disease and features of the therapeutic complex.

Methods: A survey was conducted on 41 patients with SLE: 37 girls (90.2%), 4 boys (9.8%); the duration of the disease is up to 3 years in 20 patients (48.8%) and more than 3 years in 21 (51.2%). Presence of comorbid conditions determinates as the cardiovascular system, kidney, liver and lungs functions changes. General clinical trials included autoantibodies, disease activity and drugs assessment. Total cholesterol, triglycerides, high density lipoprotein cholesterol, low-density lipoprotein cholesterol, apolipoprotein B, ApoA-I and lipoprotein- α were evaluated. The state of the blood coagulation system was also studied: fibrinogen of the blood, prothrombin index, thrombin time, active partial thrombin time, D-dimer, international normalized ratio. Bone mineral density was determined.

Results: In 74.3% of children with SLE, the presence of comorbid conditions characterized by pathology of the cardiovascular system, kidneys, liver, the organ of vision, pulmonary system is established. Besides, atherogenic dislipoproteinemia has been detected in 60.0%, disorders in the hemostasis system were in 25.0% of patients and 43.0% persons have osteopenia. Children with SLE and the presence of comorbid conditions, especially with the involvement of the liver and kidneys and the long-term preservation of the disease activity (SRP, ANA, anti-DNA), are more likely to develop atherogenic dislipoproteinemia and hypercoagulation (increase in the prothrombin index, fibrinogen and D- dimer). The values

of the comorbidity index in patients with SLE increased while maintaining the activity of the process and using high doses of glucocorticosteroids (GCS) including pulse therapy. Comorbidity index was 2.9 ± 0.5 points in the patients who received the GCS pulse therapy; 2.5 ± 0.3 in the cases of treatment by combination GCS + azathioprine; 2.0 ± 0.6 in the children without GCS; $p < 0.05$). ANA-positivity was also accompanied by higher values of the comorbidity index (2.8 ± 0.3 vs. 1.4 ± 0.5 , $p < 0.05$).

Conclusion: Children with SLE in the long-term course of the disease and while maintaining the activity of the pathologic process (ANA, DNA antibodies high level) have a formation of lesions of systems and organs, the lipids metabolism disorders, prolonged hypercoagulation and the development of osteopenia. Aggressive therapy for reducing the activity of the autoimmune process helps to prevent the formation of comorbid states and persistent metabolic disorders.

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AB0946 QUALITY IMPROVEMENT IN PEDIATRIC RHEUMATOLOGY: A NEW APPROACH TO CARE IN QATAR

Sharon Bout-Tabaku. Sidra Medicine, Pediatric Rheumatology, Doha, Qatar

Background: Quality improvement (QI) projects have been established in many pediatric and adult rheumatology centers around the world to enable real time improvement of health delivery and outcomes. QI has been driven by the Institute of Medicine, patients, professional organizations and the providers. Notably, another driver is the discrepancy between the availability of better and targeted therapies and poor disease outcomes.¹ QI allows for healthcare teams to decide on improvement goals to address gaps in care and implement these goals in sustainable ways, evaluate the impact and start a new cycle of improvement. In so doing, teams collaborate, learn from each other, and improve variability in a short time frame. In small practices with limited resources, effective QI projects allows for understanding the gaps in the processes, data collection and several process improvements to be done by different team members, in short cycles that allow for real time data evaluation and fine tuning processes.

Objectives: We describe the chosen quality measures, implementation of processes and first 6 months of data at a newly opened Children's Hospital in Doha, Qatar.

Methods: We chose quality measures that have been proposed in the literature and have been implemented in large learning collaboratives.¹ We worked with the informatics team to build measures that are accurately captured and retrievable from the electronic medical record. Additionally we worked with our Ophthalmology clinic to ensure a smooth referral pathway that is coordinated by nursing staff. Our EMR measures were 1) the screening for drug toxicity among patients receiving methotrexate or leflunomide within 3-4 month of receiving Methotrexate 2) the time between referral to and visit in Ophthalmology, to screen for toxicity among patients receiving hydroxychloroquine 3) time between referral to and visit in Ophthalmology, to screen for uveitis in children diagnosed with juvenile idiopathic arthritis.

Our nursing teams developed a manual joint injection log 1) to capture whether the time between referral for procedure and procedure date occurred within 2 weeks, and monitor side effects.

We examined data between June to December 2018 from the pediatric rheumatology patient population of 420 unique patients.

Results: 96% of children receiving methotrexate or leflunomide were screened for methotrexate toxicity within 3-4 months of the medicine being dispensed.

50% of children receiving hydroxychloroquine were seen by Ophthalmology within 4 months of the referral.

71% of children with JIA were seen by Ophthalmology within 1 month of the referral.

100% of children had joint injections performed within 14 days of the referral.

Conclusion: We described the development, implementation and results of our pediatric rheumatology QI projects. To our knowledge it is the first of a kind in Qatar and in the area. For our growing practice of 600 patient visits our data shows areas of great performance and poor performance, specifically in eye care for our patients. Barriers included education of teams about QI measures and processes, collaborating with other services on negotiating best patient practices.

Successful implementation in our processes underlines the need for further data collection and additional improvement cycles. Additionally, in resource poor areas, it is essential to make good use of the EMR and