A repeated examination of children and adolescents with SLE who received 25(OH)D drugs for a long time did not reveal a similar association.
Conclusion: The majority of children and adolescents with SLE are deficient in vitamin D. The results of the study suggest an important role of vitamin D in the development of renal impairment and the need to add vitamin D to the complex of therapy for this category of patients.

Disclosure of Interest
None declared

P264
Spondyloenchondrodysplasia in a female toddler presenting as systemic lupus erythematosus

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Introduction: Systemic lupus erythematosus (SLE) onset during toddlerhood is very rare and a monogenic etiology should be suspected.
Objectives: To present the disease course of a case of spondyloenchondrodysplasia presenting as SLE with nephritis and thrombocytopenia.
Methods: Case presentation.
Results: A 14-month female toddler was hospitalized with sudden onset fever (39 °C), petechial rash and hyposphagma. Initial laboratory investigation revealed leukopenia, thrombocytopenia, nephrotic range proteinuria, glomerular hematuria and casts, increased ESR and positive Direct Antiglobbulin Test. On the diagnosis of immune thrombocytopenia Intravenous Immunoglobulin was initiated. The patient developed nephritic syndrome necessitating intensive antihypertensive treatment with ramipril, propranolol and felodipine. Fever persisted. Infectious causes and malignancies were excluded. Renal biopsy on the 11th day of persistent nephritic-nephrotic syndrome revealed diffuse global proliferative lupus nephritis with active lesions class IV-G (A). IgG, IgA, IgM values were normal, C3 and C4 profoundly decreased; C1, CH50 and alternative complement pathways were normal. Antinuclear Antibodies titre was 1/640, diffuse pattern; antiphospholipid antibodies and
Extractable Nuclear Antigen Antibodies were absent. Brain CT performed for persistent irritability revealed bilateral and symmetrical calcifications of the basal ganglia. Intravenous Methylprednisolone pulses and mycophenolate mofetil (MMF) were initiated. Fever subsided and White Blood Cells and platelet counts improved. Nephritis persisted after 5 Intravenous methylprednisolone pulses followed by methylprednisolone 2 mg/kg/d. MMF was changed to IV cyclophosphamide pulses fortnightly leading proteinuria into remission. After 4 cycles, cyclophosphamide was changed to MMF again due to persistent leukopenia. In 6 months the disease remitted. Periodically the patient had microscopic glomerular hematuria and leukopenia treated with mild increases of steroid dose. Stepdown of antihypertensives was impossible. Normalization of C3 and C4 levels excluded the diagnosis of primary hypocomplementemia. At the age of 25 months while SLE into remission, she developed walking difficulty, gradually progressing to spastic paraplegia, with normal spinal cord, brain MRI and lower limb muscle imaging. Whole Exome Sequencing revealed homozygocity for the likely pathogenic mutation 721G>A:p.D241N in the *ACP5* gene, causative for spondyloenchondrodysplasia with immune dysregulation. Skeletal survey revealed transverse sclerotic metaphyseal bands with irregular borders involving proximal and distal femur, proximal tibia and fibula, distal ulna and radius, bilaterally and platyspondyly of the vertebra throughout axial skeleton. During a 3 year follow-up the disease flared twice. Periods of high disease activity were complicated by urinary tract infection with bacteremia. Her height gradually fell below the 3rd percentile despite initial improvement on the 1st year of treatment, possibly a primary manifestation of spondyloenchondrodysplasia.
Conclusion: Spondyloenchondrodysplasia is a defect of IFNa signaling, associated with skeletal, neural and immune manifestations. Mutations in the *ACP5* gene have been associated with autoimmune manifestations however SLE as the initial disease manifestation, during toddlerhood has not been previously described.
Patient Consent Received
Yes

Disclosure of Interest
None declared

P265
DNASE1L3 deficiency, new phenotypes and evidence for a transient type I interferon signaling

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Introduction: Deoxyribonuclease 1 like 3 (DNASE1L3) is a secreted enzyme that has been shown to digest the extracellular chromatin derived from apoptotic bodies, and *DNASE1L3* pathogenic variants have been associated to a lupus phenotype. It is unclear whether interferon signaling is sustained in DNASE1L3 deficiency in humans.

Objectives: Here, we report on four patients with pathogenic variations in *DNASE1L3*, including 2 previously undescribed causal variants, and expand the phenotype from SLE to vasculitis with gut involvement. To explore whether or not the interferon cascade was strongly and sustainably induced, Interferon stimulated genes (ISGs) expression was assessed for each patient. We also review previous reports highlighting the spectrum of DNASE1L3 deficiency.
Methods: Identification of disease-causing variants was based on NGS sequencing in 3 out of 4 patients, and for one patient, coding regions of the *DNASE1L3* gene were directly sequenced by Sanger sequencing.
Type I interferon signature was determined using either quantitative reverse transcription polymerase chain reaction or nanostring technology, and serum IN-α2 concentrations was measured using simoa assay.
Results: Disease in one patient was characterized by lupus nephritis and skin lesions, while two others exhibited hypocomplementemic urticarial vasculitis syndrome. The fourth patient presented with early-onset inflammatory bowel disease. Contrary to canonical type-I interferonopathies, we noticed a transient increase of ISGs in blood, which reverted to normal with disease remission.
Conclusion: Reviewing previous reports, DNASE1L3-related disease appears to carry a significant risk of lupus nephritis and a poor outcome together with the presence of anti-neutrophil cytoplasmic antibodies (ANCA). DNASE1L3 deficiency may share the pathogenesis with C1q deficiency by affecting efferocytosis, and this report suggests that interferon production is not directly driven by *DNASE1L3* pathogenic variants.
Patient Consent Received
Yes

Disclosure of Interest
None declared

P266
Disease activity, remission and flare in a Dutch childhood-onset systemic lupus erythematosus cohort: a pilot study
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Introduction: Childhood-onset systemic lupus erythematosus (cSLE) is a lifelong and potential life-threatening multisystem autoimmune disease. cSLE generally has a more severe course than SLE in adults with higher cumulative disease activity and earlier accrual of damage over time. Therefore, achieving and maintaining disease remission is specifically important for children with cSLE. Lupus Low Disease Activity State (LLDAS) is a disease index describing a state of low lupus activity in adults and could be a useful tool for a treat-to-target approach in cSLE as well.
Objectives: To investigate the course of disease activity in a prospective cohort of Dutch cSLE patients focused on achieving disease remission and medication use.
Methods: All patients fulfilled the Systemic Lupus International Collaborating Clinics classification criteria. Clinical characteristics and medication use were prospectively collected. Disease activity was measured with BILAG-2004, SELENA-SLEDAI and Physician Global Assessment (PGA). In short, LLDAS is defined by SELENA-SLEDAI ≤ 4 without an increase since the previous visit, SELENA-SLEDAI-PGA $\leq$1.0, and treatment with maintenance dose of immunosuppressants and/or prednisone $\leq$ 7.5 mg/day. Clinical remission (CR) is defined by PGA and SELENA-SLEDAI equal to 0. For CR with treatment (Tx), patients are allowed hydroxychloroquine, low dose prednisone ($\leq$5 mg/day), maintenance dose of immunosuppressants and biologicals. For CR without Tx, patients are allowed hydroxychloroquine. Disease flare is defined as increase of 1 point in the PGA and/or score $\geq$12 or increase of >4 points in the SELENA-SLEDAI and/or having A or B in any domain of the BILAG-2004 since the previous visit.
Results: 54 patients (85% female, 52% white) with a total of 550 visits (median 10 per patient) were included. Organ system involvement was most often found in the hematological (69%) and mucocutaneous (67%) domains, 33% had renal involvement. BILAG-2004, SELENA-SLEDAI and PGA at diagnosis had a median of 10 (2-42), 9 (1-29) and 2.0 (0.5-3.0). After 6 months of follow-up, BILAG-2004, SELENA-SLEDAI and PGA had decreased to a median of 2 (0-13), 2 (0-16) and 0.3 (0.0-2.0). 49 children ever achieved LLDAS in a median of 179 days. 20 children ever achieved CR with Tx in a median of 406 days, and 12 ever achieved CR without Tx, median of 485 days. 28 children ever had a disease flare, median of first flare at 237 days. 87% of children were treated with hydroxychloroquine within 3 months after diagnosis. Mycophenolate mofetil (MMF) was the most frequently used immunosuppressant, 55% of children were treated with MMF within 6 months after diagnosis. 50% of children were treated with prednisone at diagnosis, median dose 0.76 mg/kg/day, 51% still had prednisone after 6 months but with reduced doses (median dose 0.16 mg/kg/day). At 1 year after diagnosis, 21% used prednisone (median dose 0.21 mg/kg/day).
Conclusion: In this cSLE cohort, LLDAS was a realistic goal, achieved in almost all children within 6 months after diagnosis and a useful (additional) guide for a treat-to-target approach. In concordance with European guidelines, prednisone use could be decreased significantly within 6 months after diagnosis, however paralleled with equal increase in use of immunosuppressants. We are currently extending this study in multiple Dutch centers to validate these results and relate achieving disease remission and prednisone use to damage accrual over time.
Patient Consent Received
Yes

Disclosure of Interest
None declared

e-Poster viewing: New diseases

P267
A novel presentation of a hereditary periodic syndrome: which variant is responsible?
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Introduction: Recently, plasminogen, its activators, and its receptors have gained more attention in inflammation regulatory processes, including release proinflammatory signaling molecules, and thus its role has implications for a wide spectrum of clinical manifestations.
Objectives: To present a case of homozygous plasminogen variant managed initially as periodic fever syndrome.
Methods: A retrospective report of a child who presented with a constellation of findings; which cannot fully be explained by one classified autoinflammatory disease.
Results: A 9-year-old boy presented at the age of 18-months with periodic fevers and vomiting every 3 weeks, lasting for 48-72 hours. Heterozygous variant of *MEFV* gene was detected (c.442G>C; p.E148Q). Over a period of 7 years he developed recurrent