and BD can be considered as the crossroad of autoinflammatory and autoimmune diseases.
Objectives: We describe the case of a 9-year-old caucasic male, who presented at age 6 y with recurrent episodes of fever, oral ulcers and pain at the limbs, hands, wrists. At the physical examination the child showed functional limitation of flexion and extension movements of the wrists (left > right) and a bilateral mild joint stiffness of the shoulders. He showed a mild delay in the stages of psychomotor development, and a mild hypotrophy of the muscles of the lower limbs.
Methods: The metabolic disease expert excluded metabolic diseases, based on the metabolic diagnostic investigations. Ultrasound documented knees joint effusion in the lateral supra-patellar seat with synovial membrane's thickening and evident right knee synovial phlogosis, minimal on the left. A Whole body MRI, reported intra joint fluid effusion in external lateral seat and in sub patellar seat of the left knee. Intraspongious edema of the cuboid of the right foot. The eye examination with slit lamp was normal; HLA-B27, Anti-streptolysin O titer, pharyngeal swab and specific serologies for infectious diseases were negative. Fecal calprotectin was normal. Antinuclear antibodies (ANA) were positive 1:320 with a granular pattern.
Results:
The genetic study in NGS for autoinflammatory diseases revealed a heterozygous mutation, defined as VUS, of the RELA gene: c.1537C>G (p.Pro513Ala). Mutations of the RELA gene are associated with a familiar autoinflammatory disease Behçet's disease (BD)-like type 3, with an autosomal dominant transmission. The Familial Behçet-like autoinflammatory disease-3 (AIFBL3), caused by heterozygous mutation in the RELA gene on chromosome 11q13, is characterized predominantly by chronic mucocutaneous ulceration.
Conclusion: The patient did not yet fulfil the paediatric BD (PEDBD) nor ICBD criteria for the diagnosis of paediatric BD, however it is well described that BD is an evolutionary disease, and clinical manifestations may appear over the years (1-3).
Monogenic BD-like conditions are increasingly recognized and to date have been found to predominantly involve loss-of-function variants in TNFAIP3. This case describes a child carrying the RELA gene mutation, with clinical symptoms evoking BD. The RELA gene mutations are conditions related to dysregulated NF-κB activation and need a strict follow-up and a prompt start of treatment, also in patients who do not fulfil the diagnostic criteria for BD.

Patient Consent
Yes, I received consent

Disclosure of Interest
None declared

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2) Gallizzi R, et al. Pediatr Rheumatol Online J. 2017 Dec 21;15(1):84.
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P333
BD-like disease associated with TNFAIP3 gene mutation: a case report
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Introduction: Behçet's disease (BD) is a chronic, multifactorial systemic vasculitis with a strict link with autoinflammatory and autoimmune diseases. It can affect various organs and tissues, with recurrent oral and genital ulcers, skin lesions, joint pain and swelling (1), eye inflammation, gastrointestinal disease (2-3). Monogenic BD is a rare subtype of the disease, shows an earlier age of onset and a more severe disease course. One gene associated with monogenic BD is TNFAIP3, encoding A20, a protein regulating inflammation and immune response. Loss-of-function mutation in TNFAIP3 triggers a new autoinflammatory disease: HA20, characterized by a wide range of clinical pictures, caused by chronic inflammation, as BD.
Objectives: We describe the case of a 11-year-old boy firstly diagnosed at the age of 9 years, with hypertension, secondary to renal arteries stenosis, ascending aortic ectasia, celiac trunk ectasia, superior mesenteric artery stenosis, documented by ecocolordoppler, angio-MRI and angio-TC. The first suspected diagnosis was Takayasu arteritis. The mother received the diagnosis of SLE, the maternal grandmother had Moschowitz disease.
Methods: For the start of limbs pain, periodic attacks of fever, oral aphthae he was referred to the Pediatric Rheumatology unit. He did not present swelling of knees, ankles, wrists, fingers, conformed by echography.
Results: MRI documented bilateral sacroiliitis, confirmed the preexisting vascular lesions, showed slightly thickened walls of sigma, with signs of inflammation. The eye examination with slit lamp was normal. He showed positive ENA, anti-C1q, anti-cardiolipin, anti-thyroglobulin, anti-thyroid peroxidase antibodies. SAA 22 (nv<6). HLA-B51 is absent.
The genetic molecular analysis of autoinflammatory diseases, showed a heterozygous variant of TNFAIP3 classified as VUS (p.Ala545Val) with maternal segregation. Pathogenetic variants of TNFAIP3 gene are related to a dominant inherited familial autoinflammatory syndrome BD-like.
However, despite the severity of the clinical picture, the patient did not yet meet neither ICBD, nor ISG, nor PEDBD diagnostic criteria. However, the genetic background, the family history and the severe vasculitis guide the diagnosis in this challenging case.
Conclusion: The correlation between TNFAIP3 and Takayasu or SLE was recently proposed, however, our patient developed clinical signs, as bowel inflammation and sacroiliitis, supporting to the diagnosis of BD. Genetic counseling may be recommended for patients with monogenic BD. The diagnosis of monogenic BD should be made by a qualified healthcare team, based on a comprehensive evaluation of the patient's symptoms, medical history, physical examination, and genetic testing.
Trial registration identifying number:

Patient Consent
Yes, I received consent

Disclosure of Interest
None declared

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1) Gaggiano C, et al. Intern Emerg Med. 2023 Apr;18(3):743-754.
2) Gallizzi R, et al. Pediatr Rheumatol Online J. 2017 Dec 21;15(1):84.
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P334
The thousand faces of mevalonate kinase deficiency: a challenging case
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Introduction: Mevalonate Kinase Deficiency is a rare inborn error of metabolism with an autosomal recessive inheritance due to mutations in the *MVK* gene. Residual enzymatic activity between 1 and 10% is associated to hyperimmunoglobulinemia D syndrome (HIDS)

(characterized by an auto-inflammatory phenotype), while, if enzymatical activity is about 0%, it can cause neurological involvement (Mevalonic aciduria: MVA) (1-2).
Objectives: The diagnosis is based on the detection of elevated mevalonic acid levels in urine, even in the attack-free interval. This biochemical determination differentiates patients with MVA from patients with HIDS. The genetic study of the *MVK* gene confirm the diagnosis. Therapeutic options include non-steroidal anti-inflammatory drugs while more severe cases require therapy with IL-1beta or IL-1 receptor antagonists.
Methods: We describe the long-term follow-up of an adolescent with MVA, followed by our Metabolic Diseases Unit.
Results: The patient was born at 30 weeks with a birth weight of 2100g. He was admitted to neonatal intensive care unit for maladaptation to extrauterine life and respiratory distress. He showed frequent febrile episodes associated with diarrhea, bowel occlusion and hepato-splenomegaly. Laboratory findings showed anemia, leukocytosis with neutrophilia, thrombocytopenia, elevated levels of CRP, ALT, AST and ESR. After discharge, the patient showed reduced growth velocity, recurrent febrile episodes, arthritis, and vasculitis skin manifestations. After excluding infectious enteritis, auto-immune diseases, etc, at 17 months of age, the child underwent a metabolic disease specialist evaluation at our hospital. He showed elevated urinary levels of mevalonic acid and mevalonolactone; thus, a diagnosis of MVA was considered, confirmed by the genetic study, showing the homozygous c.709A>T substitution in the *MVK* gene, with a consequent p.7237S aminoacidic substitution.
Therefore, we started a therapy with NSAIDs, ubiquinone, anti-leukotriene, vitamin C and E. Moreover, we suggested systemic corticosteroid therapy for possible acute crises (methylprednisolone 2mg/kg). Given the poor clinical conditions, the neurologic impairment and the frequent febrile episodes, corticosteroid therapy was needed with an increased frequency and with higher dosage, developing steroid-dependence. He switched to anakinra, with a prompt improvement of clinical conditions. Unfortunately, a month after starting daily administration of anakinra, the patient had an adverse event which required discontinuing the therapy, which was then switched to canakinumab.
Conclusion: The patient is currently 18 years old and is still treated with canakinumab, with a good disease control, a satisfactory growth and neuropsychologic development. The long-term follow-up of these rare cases is useful to highlight the effectiveness of anti-IL1 treatment not only to control the attacks of the disease, but also to ensure psychomotor development, height velocity and optimize prognosis and quality of life.

Patient Consent
Yes, I received consent

Disclosure of Interest
None declared

P335

Mevalonate kinase deficiency: early presentation caused by a rare homozygous mutation in the MVK gene

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Introduction: Mevalonate Kinase Deficiency (MKD) is a rare autosomal recessive autoinflammatory disease due to a *MVK* gene mutation. The phenotype is variable, from Periodic Fever Syndrome (PFS) to Mevalonic Aciduria (MA) and treatment remains a challenge depending on the clinical features.
Methods: We describe a case of a female neonate, full term from non-consanguineous African healthy parents. Fever, with ascites, transient tachypnea started the first days of life and lasted intermittently for several weeks. Despite receiving broad-spectrum antibiotics, the neonate continued to have flares. Further investigations revealed mevalonic aciduria and genetic tests confirmed the homozygous *MVK* c.346T>C, p.Tyr116His pathogenic variant. Anakinra was started with adequate response except for persistent high mevalonic aciduria. From her 6 months, she developed a very early onset inflammatory bowel disease (VEO-IBD) with recurrent life-threatening hemorrhagic ulcerative colitis. Association of immunosuppressive drugs with corticosteroids, anakinra/canakinumab, adalimumab, and methotrexate offered long-term remission of VEO-IBD and inflammation, again except mevalonic aciduria. However, no neurologic disorder or development delay were found apart from mild delay gait acquisition.
Results: The pattern for the PFS is characterized by fever attacks associated with systemic inflammatory reaction. Mevalonic aciduria, a severe metabolic disease, manifests as systemic inflammation and is usually accompanied by dysmorphic features, retinopathy, enteropathy and neurologic disorders. Biological tests reveal inflammatory markers, and constant elevated urinary mevalonic acid levels, even in the absence of a flare-up in MA.
To our knowledge, our patient is the second homozygote *MVK* c.346T>C. The first case showed hepatitis, developmental delay and inflammatory flares. Our patient's auto-inflammatory manifestations associated to the persistent mevalonic aciduria, in the absence of dysmorphic features and neurologic disorders, argue for a continuum between PFD and MA. Furthermore, as described in a small serie, MVK deficiency can also mimics VEO-IBD with generally an insufficient response to the anti-TNF treatment. Our patient had an inadequate response to the anti-Il1b agent and successful results were obtained with combination of immunosuppressive therapies including corticosteroids, high doses of adalimumab and anakinra, and methotrexate. No severe side effects, such as infection, were noted and catch-up was observed.
Conclusion: Our case suggests that the c.346T>C homozygous mutation in *MVK* could lead to a severe early phenotype an suggests a continuum between PFS and MA. MKD should be considered in feverish patient with VEO-IBD to reduce diagnostic delay and improve outcome with early initiation of tailored treatments.

Patient Consent
Yes, I received consent

Disclosure of Interest
None declared

P336

Chronic recurrent multifocal osteomyelitis associated to inflammatory bowel diseases: a neglected association

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Introduction: Chronic recurrent multifocal osteomyelitis (CRMO) is a rare inflammatory disease characterized by multiple sterile bone lesions that typically involve the metaphysis of the long bones and the axial skeleton. Association of CRMO with Inflammatory Bowel Diseases (IBD), has been reported in some cases. However, still little is known about the topic.
Objectives: to evaluate the prevalence of IBD in a cohort of CRMO patients and to describe their clinical, serological and radiological characteristics and response to treatments.
Methods: the clinical, serological and radiological characteristics of the CRMO patients with an IBD (Crohn's disease (CD), ulcerative colitis (UC), U-IBD (undifferentiated IBD) followed at the Istituto Giannina Gaslini were retrospectively reviewed.