diet, who were under medical and dietary control at the Institute of Mother and Child in Warsaw (Poland). Anthropometric measurement, body composition (fat mass, lean mass, bone mineral content) and dietary constituents were assessed in all studied children. Body composition was measured by dual-energy X-ray absorptiometry. Dietary assessment was performed using a nutritional software program Dieta5. Concentrations of bone metabolism markers (osteocalcin – OC, C-terminal telopeptide of collagen type I – CTX) and myokines (myostatin and irisin) were determined in serum samples by immunoenzymatic assay. Statistical analyses were done using Statistica software. This study was approved by the Ethics Committee at the Institute of Mother and Child.

There were no significant differences in the anthropometric parameters: weight, height and body mass index in both studied groups. Compared with omnivores, vegetarians had similar bone mineral contents but lower ($p<0.05$) lean mass and percentage of fat mass. Average daily dietary energy intake was similar in both studied groups, however, vegetarians had a lower intake of protein and higher intake of carbohydrates compared with omnivores (both $p<0.05$). The serum concentration of OC was significantly lower in children on a vegetarian diet compared with omnivores (66.9 ± 13.7 vs. 85.2 ± 20.5 ng/mL, $p<0.01$). Additionally, levels of CTX were higher in vegetarians than in omnivores (1.970 ± 0.341 vs. 1.597 ± 0.351 ng/mL, $p<0.01$). Serum myokines concentrations did not significantly differ in both studied groups of children, but we observed slightly higher (by about 15-20%) levels of myostatin and irisin in vegetarians.

Our results show that a well-planned vegetarian diet with proper dairy and egg intake does not lead to changes in bone mass in prepubertal children.

However, children following a vegetarian diet had a higher rate of bone turnover and subtle changes in serum myokine levels.

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HEMATURIA AS AN EARLY SIGN OF MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN (MIS-C): A CASE REPORT OF A BOY WITH MULTIPLE COMORBIDITIES

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While clinical course of SARS-CoV-2 infection seems to be milder or asymptomatic within pediatric population, growing attention has been laid to the rare complication elicited by virus, multisystem inflammatory syndrome in children temporarily associated with COVID-19 (MIS-C). Published definition and criteria of MIS-C include persistent fever, multisystem involvement and elevated markers of inflammation, without obvious microbial inflammation or other plausible diagnosis. The aim of this case report is to emphasize diversity of symptoms of MIS-C.

We present a case of a ten-year-old boy with multiple comorbidities who developed MIS-C after asymptomatic SARS-CoV-2 infection. To our knowledge this is the first reported case of transient gross hematuria as an early sign of MIS-C. Beside hematuria, patient also presented persistent fever and elevated markers of inflammation, with no other sign of renal affection.

Moreover, he had discrete erythematous maculopapular rash on the right lower leg. Within the next two days, his condition continued to worsen despite the broad-spectrum antibiotic therapy. He started to vomit and developed abdominal pain, conjunctivitis, arrhythmia and mild left ventricular systolic dysfunction with hypotension and pleural effusion. High level of clinical suspicion for MIS-C was supported by laboratory findings (elevated ESR, CRP, proBNP, D-dimers and fibrinogen) along with positive IgG

SARS-CoV-2 antibodies and negative microbiological cultures. The patient was given intravenous immunoglobulin (IVIG) at a dose of 2 g/kg and began to show instantaneous clinical improvement, including downtrend of fever and inflammatory markers.

Despite the growing reports of the MIS-C in the literature, there is still paucity of studies describing the various clinical manifestation and laboratory finding in this serious condition which can be easily mistaken for many others inflammatory diseases. Therefore, pediatric professionals must be aware of (many) unusual presentations of COVID-19 associated disease in order to early recognize and treat such challenging patients.

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MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN, MANAGEMENT IN A PERIPHERAL SETTING

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Introduction In the context of the Covid 19 Pandemic Multi-system Inflammatory Syndrome in Children (MIS-C) is an important new differential requiring consideration, this report describes 2 cases seen in a secondary paediatric centre setting.

Case Description Case 1: A 3 year-old boy presented with a four-day history of fever, malaise and decreased oral intake. The fever was persistent, it peaked at 40.8 C.

Over 4 days he had had 2 vomits but no other symptoms. He had no significant medical history and no known history of Covid 19 disease. Physical examination revealed no source of fever.

Case 2: A 14-month-old girl presented with a 1 day history of fever, malaise and decreased oral intake. She had no significant medical history and no known history of Covid 19 disease. No source of fever was evident on exam.

Initial investigations included chest x-ray, urine culture, blood culture and throat/nasal swab for PCR for SARS CoV-2, all were negative.

Their markers of inflammation were elevated and continued to rise with persistent fever, despite treatment with IV ceftriaxone.

With no clear source of fever and no improvement, in consultation with the Infectious Diseases team in our tertiary referral hospital, we began treatment with intravenous immunoglobulin (IVIG), IV methylprednisolone and high dose aspirin for suspected MIS-C in Case 1, Case 2 was transferred to the tertiary centre for the same treatment at the ward level. With the IVIG infusion, all fever and symptoms resolved.

An Echocardiogram was organised for each in the acute setting and repeated at 6 weeks, they demonstrated normal cardiac systolic and diastolic function with no evidence of significant coronary dilatation.