Case Discussion Though MIS-C is rare, with an incidence of 0.14% among children with SARS

CoV-2 infection according to one Systematic Review (Hoang Et al. 2020), it is an important new differential which must be borne in mind in cases of fever with no clear source. Both of these cases had a negative PCR test for SARS CoV-2 and no history of Covid 19 disease. No serological testing for SARS CoV-2 was available in our hospital setting. But in accordance with RCPCH guidelines this does not exclude the diagnosis of MIS-C

In previous studies as many as 71% of cases of MIS-C required PICU admission (Ahmed Et al., 2020), however not all are severely unwell and may be stable enough to be managed on a ward setting as described above.

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EXOGENIC AND ENDOGENIC FACTORS AFFECTING THE SUPPLY OF VITAMIN D IN HEALTHY CHILDREN AND ADOLESCENTS OF THE SOUTH OF RUSSIA IN WINTER-SPRING PERIODS

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Study objectives – to analyze the influence of exogenous and endogenous factors on the supply of vitamin D in children and adolescents living in southern Russia in the winter-spring period.

The study included 27 healthy children and adolescents, aged 3 months to 16 years, living in Stavropol (45°02' N 41°58'E). Children under 3 years old were 9 (33.3%), 4 to 7 years old – 5 (18.5%), 8 to 11 years old – 6 (22.3%), 12 to 16 years old – 7 (25.9%) people. Blood sampling was performed in February-March 2018. Vitamin D provision was assessed by the serum calcidiol level. Satisfactory supply was diagnosed at a level of 25 (OH) D 30-100 ng/ml, insufficiency – 20 to 30 ng/ml, deficiency – less than 20 ng/ml.

The study of polymorphism of biotransformation genes was carried out by PCR and subsequent RFLP analysis. Polymorphisms selected for study included CYP2C9*2 (430C>T; R144C), CYP2C9*3 (1075A>C; I359L), CYP2D6*4 (1846G>A), CYP3A4*1B (-392C>T).

Median vitamin D availability was 34.6 [23.5-44.6] ng/ml. Vitamin D deficiency was detected in 5 (18.5%) children, deficiency was also found in 5 (18.5%) children, satisfactory provision was revealed in 17 (63.0%) children.

There is a negative correlation between the age of children and the level of 25(OH)D: $r = -0.69$, $p = 0.0001$, as well as between body weight and calcidiol level $r = -0.64$, $p = 0.0004$.

Direct correlation was found between the dose of cholecalciferol products and serum 25(OH)D level, $r = -0.60$, $p = 0.001$.

With CC polymorphism (CYP2C9*2) 25(OH) D < 30 ng/ml was detected in 8 (80.0%) children, and more than 30 ng/ml – in 2 (20.0%), with CT – in 2 (20.0%) and in 2 (11.8%) respectively. With polymorphism AA (CYP2C9*3) 25(OH) D < 30 ng/ml was in 9 (90.0%) children, more than 30 ng/ml – in 15 (88.2%), with CA – in 1 (10.0%) child and in 2 (11.8%) children respectively. With TT polymorphism (CYP3A4*1B) 25(OH) D < 30 ng/ml was detected in 9

(90.0%) children, and more than 30 ng/ml – in 16 (94.1%) children, with TC – in 1 (10.0%) and in 1 (5.9%) respectively. With polymorphism GG (CYP2D6*4) 25(OH)D < 30 ng/ml was detected in 7 (70.0%) children, and more than 30 ng/ml – in 13 (76.5%) children, with GA 25(OH)D < 30 ng/ml was in 2 (20.0%), more than 30 ng/ml – in 4 (23.5%), AA was only in 1 (10.0%) child with vitamin D less than 30 ng/ml.

Insufficient vitamin D levels were found in 37.0% of healthy children and adolescents living in the Southern Russia. The serum calcidiol level depends on age; the older is the child, the higher is the likelihood of hypovitaminosis D. Intake of cholecalciferol product is an effective way to prevent vitamin D deficiency and insufficiency, while hypovitaminosis D was not convincingly associated with any of the studied polymorphisms of biotransformation genes: CYP2C9*2, CYP2C9*3, CYP2D6*4, CYP3A4*1B.

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IRON DEFICIENCY ANEMIA IN ADOLESCENT – AN UNEXPECTED DIAGNOSIS: CASE REPORT

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Background Iron deficiency anemia (IDA) in adolescents is very common. The major causes at this age are an inadequate diet. Obesity or malnutrition are also causes of IDA. Besides that, many adolescents have genital losses (girls) or gastrointestinal tract disorders like inflammatory bowel disease, coeliac disease, hemorrhoids or diverticulitis. Moreover, less common chronic or acute diseases can cause this anemia.

Case Report A 17 year old female was oriented from primary care to pediatric evaluation because of iron deficiency anemia with failure of oral iron treatment after six months. In pediatric evaluation, the adolescent presented inadequate diet and no other problems. There were doubts about compliance with the iron treatment previously prescribed. She was previously healthy, had no symptoms or history of hereditary diseases or other family relevant pathology and had regular menstruation. As such, in the first evaluation, an extensive analytical study was requested, a more assertive oral iron treatment was initiated and diet correction was explained. One month later, the adolescent maintained IDA. As such, the iron treatment was doubled. Besides that, a slight increase in fecal calprotectin and thrombocytosis was detected. The rest of the analytical study did not have any changes. Thus, gastroenterology evaluation was requested for suspicion of inflammatory bowel disease. After three months, the adolescent returned and referred feeling right hypochondrial pain over the last two months which was controlled with paracetamol. Ultrasound evaluation of the abdomen was performed and revealed circumferential thickening of the ascendant colon and many mesenteric adenopathies. A CT scan was done which showed an eight centimeter long tumoral mass in the ascendant colon, as well as an inferior vena cava involvement and bulky adenopathies in venous drainage.

The adolescent was transferred to a central hospital and evaluated by pediatric oncology and surgery. A percutaneous biopsy revealed mucinous adenocarcinoma with colorectal phenotype. This diagnosis led to a surgery in which laparoscopic right hemicolectomy, epiploon excision and peritonectomy were