subtypes, specialized software named Protein Reader with implemented Dust algorithm have searched through the NCBI nr database, that contains the records of more than 400 E coli subtypes. The median age of patients was 7.14 and 7.11, respectively.

Various E coli subtypes (P0301867.1-10, O104:H4, O103:H25, O111:H11, KTE and K) were three times more abundant in patients with JIA, while in children with ReA, the abundance of diarrheagenic E. coli (DEC) was detected.

Many studies have speculated the influence of gut microbiota in the development of arthritis in children. Despite the technological advancements in the examination of microbiota composition, there are still many limitations imposed by patient selection, methodology and data analysis.

Besides, without the proper definition of 'healthy' microbiome as a reference standard, it is challenging to distinguish alterations responsible for diseases development. In our proof-of-the-concept study microbiota was therefore compared in two groups of patients both presenting with arthritis.

Since E coli is one of the paramount bacteria in gut microbiota with more than 600 recognized subtypes, it is reasonable to assume that described differences can have a potential impact on the gut environment, with the contribution to the development of the chronic disease in JIA patients or the resolution of symptoms in children with ReA. While this observation needs conformation in multiple time points and larger patient cohorts, it pinpoints gut microbiota as a potential new therapeutic target in the treatment of chronic inflammatory diseases.

433 LONG TERM FOLLOW-UP OF THE PATIENTS WITH ANTI NUCLEAR ANTIBODY POSITIVITY WHO HAD INITIALLY NO IDENTIFIABLE RHEUMATIC DISEASES

Ilayda Altun*, Mehmet Yildiz, Gizem Yilmaz, Ayten Aliyeva, Fatih Haslak, Oya Koker, Amra Adrovic, Sezgin Sahin, Kenan Barut, Ozgur Kasapcopur. *Istanbul University-Cerrahpasa, Pediatric Rheumatology, Istanbul, Turkey*

10.1136/archdischild-2021-europaediatrics.433

Anti-nuclear antibodies (ANA) are a group of the antibodies that develop against intracellular components of the cells. It is usually useful for diagnosing some of the connective tissue diseases like systemic lupus erythematosus, mixed connective tissue disease.

But it is reported that its positivity rate is about in healthy individuals.

Therefore, it can be confusing to check ANA test, if there is not really high suspicion for connective tissue diseases or juvenile idiopathic arthritis.

We aimed to evaluate results of long-term follow-up of the patients with ANA positivity who had initially no identifiable rheumatic diseases.

Six hundred and ninety-four patients with ANA positivity who did not diagnosed as any of the rheumatic diseases at the first examination were found in database. Two hundred and eighty-two patients of them were called so far and questioned about their demographic features and symptoms that are related with rheumatic diseases.

Mean age of the patients at the time of study and at the time of testing were 13.4 ± 4.5 and 9.1 ± 4.0 years. The female: male ratio was 1.05. Mean follow-up duration was

4.3 ± 2.8 years. Most common reasons for the request for ANA test were arthralgia (n:99 (D.1)) and skin eruptions (n: 54 (24.1)). ANA testing was most commonly requested by a general pediatricists.

Most of the diseases (Hypermobility Syndrome, Urticaria, Hypothyroidism, Transient synovitis, Idiopathic Thrombocytopenic Purpura, Scoliosis) were diagnosed in patients with ANA positivity were not related with autoimmune mechanisms that associated with ANA positivity therefore, these diseases are thought to be coincidence. Only in 1 patients, systemic lupus erythematosus that has certain association with ANA positivity were diagnosed.

We are reporting that in only 0.3% of patients with ANA positivity who don't have any diseases diagnosed initially, were diagnosed as rheumatologic diseases during to the follow-up period.

Since positivity of ANA is also common in the healthy population, requesting this test in only patients with high suspicion for connective tissue disease will reduce confusion in terms of diagnosis.

434 CASTLEMAN DISEASE PRESENTED WITH PROLONGED FEVER OF UNKNOWN ORIGIN

Tamara Janjić*, M Pavlović, L Lamot, J Stepan, M Harjaček, M Vidović. *Sestre milosrdnice University Hospital Center*

10.1136/archdischild-2021-europaediatrics.434

Castleman disease presented with prolonged fever of unknown origin- a case report Janjic T(1), Pavlovic M(2), Lamot L(3), Stepan J(2), Harjacek M(3), Vidovic M(3)

(1) Sestre milosrdnice University Hospital Center

(2) Children's Hospital Zagreb, Department of Oncology and Hematology

(3) Sestre milosrdnice University Hospital Center, Department of Pediatrics, Division of clinical immunology and rheumatology

Fever is the most common cause for which children and their caregivers seek medical attention. If accompanied by elevated blood inflammatory markers, infectious diseases are suspected. However, if microbiological findings are negative, and if there is no response to antimicrobial therapy, more careful and comprehensive evaluation is required. Amongst many disorders, one of the rare but often misdiagnosed cause is Castleman disease (CD). This is a heterogeneous group of lymphoproliferative disorders with similar histopathologic features divided into three types. Unicentric CD involves one or more enlarged lymph node(s) in a single region of a body while multicentric Castleman disease involves multiple regions of lymphadenopathy and is further subclassified in HHV-8 positive and HHV-8 negative/idiopathic type.

We present a case of a 4.5-year-old boy who came to our pediatric emergency department with a history of intermittent fever for almost a month, cough, skin rash with spontaneous regression, fatigue, periodic leg pain, night sweats, and weight loss. The physical examination showed few mildly enlarged cervical lymph nodes, pale skin, antalgic gait and fever. Routine blood tests revealed elevated C-reactive protein level and erythrocyte sedimentation rate, anemia, and thrombocytosis. He was admitted to a Pediatric Rheumatology department for evaluation. Other laboratory tests showed elevated fibrinogen,

ferritin and d-dimer levels, with high C3, IL-6 and TNF-alpha levels. Microbial cultures (blood cultures, nasopharyngeal and throat swab) were sterile, and serology for Cytomegalovirus, Epstein-Barr virus, Human parvovirus B19 and Bartonella henselae were negative, while serology for Mycoplasma pneumoniae (IgM and IgG) was positive. Azithromycin was prescribed, but fever and elevated inflammatory blood markers persisted and other procedures were performed to rule out rheumatic disease. Radiogram and bone scintigraphy were unremarkable, but an ultrasound revealed a retroperitoneal mass. MRI was performed, and retroperitoneal mass measuring 3x2.5 cm, arising from the pancreas and suspected to be a neuroendocrine tumor or enlarged lymph node, along with hepatosplenomegaly was described.

FDG-positron emission tomography (PET)/CT showed a mass near the pancreas with moderately increased FDG uptake. Complete surgical resection of the mass was performed, and the histopathological evaluation revealed lymphoid hyperplasia consistent with the hyaline vascular type of Castleman disease.

An immunohistochemical study excluded HHV-8 positivity. After the surgical procedure, the patient recovered completely. On follow up visits he was without fever or other symptoms suggestive of the disease, with normal laboratory findings.

CD with systemic manifestations is rare in children emphasizing the need for thorough evaluation of unexplained prolonged symptoms.

435

SEVERE SKIN MANIFESTATIONS IN PATIENTS WITH HENOC SCHOLENLEIN PURPURA (HSP) IN FIVE TERTIARY CENTRES IN CROATIA BETWEEN 2009 AND 2019

Saša Sršen*, Mateja Batnožić Varga, Matej Šapina, Mario Šestan, Nastasia Čekada, Aleksandar Ovuka, Marijan Frković, Alenka Gagro, Marija Jelušić. *University Hospital Centre Split, University of Split School of Medicine*

10.1136/archdischild-2021-europaediatrics.435

To evaluate characteristics of patients with severe skin manifestations of Henoch Schoenlein purpura (HSP) in five tertiary centres in Croatia in time period from 2009 until 2019.

Retrospective statistical chart analysis of clinical symptoms and laboratory parameters of patients with HSP was done. Severe skin manifestations were defined as haemorrhagic bullous, ulcerated or necrotic lesions.

During observed time period 583 patients (303 boys and 280 girls) were admitted to hospital due to HSP. Prevalence of severe skin manifestations was 2.41% (14 patients, CI 1.32 – 4.003%). Severe skin manifestations occurred more often in boys than in girls with a difference on a margin of statistical significance (11 boys, 3 girls, $p=0.057$). Patients with severe skin manifestations were more prone to relapses than those with milder skin forms (severe 28.57%, milder 18.66%), with most notable difference in patients with 2 relapses of disease (severe 14.29%, milder 3.17%, $p=0.029$).

We were able to isolate infectious trigger of disease more often in patients with milder form of disease than in those with more severe (milder 38.42%, severe 7.69%, $p=0.036$).

Patients with severe skin manifestations had more often gastrointestinal system affected than those with milder skin forms

(severe 70%, milder 36.03%, $p=0.043$). There was no statistically significant difference between those two groups in other organs involvement (kidneys, joints, central nervous system, lung).

Regarding distribution of skin rash, patients with severe skin manifestations more often had a rash on a trunk, with a difference on a margin of statistical significance (severe 85.71%, milder 57.19%, $p=0.051$).

There was no statistical difference between two groups in most of other clinical and laboratory parameters. Only blood leukocyte levels were near to statistical significance with higher levels in patients with severe skin manifestations ($12.1 \times 10^9/L$ (SD 10-17.62): $10.71 \times 10^9/L$ (SD 8.45-13.42), $p=0.059$).

Patients with severe skin manifestations of HSP were more prone to relapses, and had gastrointestinal symptoms more often affected than those with milder forms, but less often had infectious trigger isolated. There was no significant statistical difference in other clinical symptoms and laboratory parameters. We couldn't set predictive model for disease outcome based on these data. Small number of patients with severe manifestations and retrospective data analysis could be the reason. Perhaps better structured prospective trial would be more appropriate in that sense.

SUPPORT: Croatian Science Foundation project IP-2019-04-8822

436

DISLIPIDEMIA AS AN ATHEROGENIC FACTOR IN PATIENTS WITH DIFFERENT FORMS OF JUVENILE ARTHRITIS

AV Krasnopolskaya*, IA Balykova, NV Shekina, UO Soldatov, SE Pomerantseva. *Medicine Institute, National Research Ogarev Mordovia State University*

10.1136/archdischild-2021-europaediatrics.436

Close connection between autoimmune inflammation and proatherogenic lipid changes in rheumatoid arthritis has been well established, while for juvenile idiopathic arthritis (JIA) is under discussion. The aim of our work was to study the incidence and intensity of lipid disturbances in patients with different forms of JIA.

90 children with JIA 6-18 years were examined using clinical, biochemical methods, ultrasonic duplex scanning of vessels, thin-layer chromatography, bioimpedance measurement. 49 children without chronic diseases made up the control group.

Dyslipidaemia, was revealed in 48.9% of patients, mainly with systemic and polyarthritis. Most often an increase in atherogenic coefficient (AC) was noted. Average AC value in JIA patients was higher than in control group (2.9 ± 0.2 versus 2.0 ± 0.1 , $p < 0.05$) and correlated with the disease activity index according to JADAS71 ($r = 0.78$), a doctor's global assessment of the disease severity according to VAS ($r = 0.61$), the degree of joints dysfunction ($r = 0.55$), C-reactive protein ($r = 0.53$) and ESR ($r = 0.68$) level. An increase in the concentration of total cholesterol was observed in 28 (31.1%) children with JIA, commonly with a long-lasting disease, and in case of CS intake. In some JIA patients atherogenic changes were detected due to apolipoprotein A1 (ApoA1) deficiency (26.7%). Patients with JIA (maximum with