al, 2014 and N Ter Haar et al, 2017) and to evaluated genotype/phenotype correlation (Papa et al, 2017).

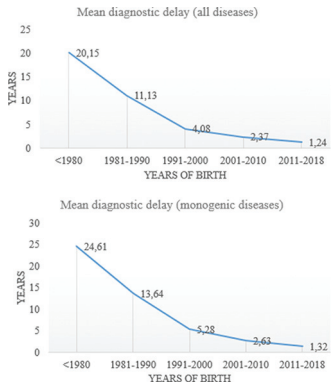

Figure 1. Diagnostic delay (years) according the year of birth

Conclusion: In the last years we have observed an encouraging increase of involved Countries, with a greater number of patients coming from geographic area poorly represented in the first epidemiologic study of Toplak et al. Eurofever data analysis has confirmed an improvement of diagnostic ability during the last years, with a significant reduction of mean diagnostic delay. Longterm studies will help understand the efficacy and safety of different treatments used in these rare conditions.

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I perform consultancy activities on behalf of the Gaslini Institute for the companies listed below:
AbbVie, Biogen, Boehringer Ingelheim, Bristol-Myers Squibb, EMD Serono, Janssen, Novartis, Pfizer, R-Pharm.
The money received for these activities are directly transferred to the Gaslini Institute's bank account. Before March 2016, I was the head of the Pediatric Rheumatology Department at the G. Gaslini Hospital, where the PRINTO Coordinating Centre is located. For the coordination activity of the PRINTO network, the Gaslini Hospital received contributions from the industries listed in this section. This money has been reinvested for the research activities of the hospital in fully independent manners besides any commitment with third parties., Nicolino Ruperto Grant/research support from: The Gaslini Hospital, where NR works as full-time public employee, has received contributions (> 10.000 USD each) from the following industries in the last 3 years: BMS, Eli-Lilly, GlaxoSmithKline, F Hoffmann-La Roche, Janssen, Novartis, Pfizer, Sobi. This funding has been reinvested for the research activities of the hospital in a fully independent manner, without any commitment with third parties., Consultant for: Received honoraria for consultancies or speaker bureaus (< 10.000 USD each) from the following pharmaceutical companies in the past 3 years: Ablynx, AbbVie, Astrazeneca-Medimmune, Biogen, Boehringer, Bristol-Myers Squibb, Eli-Lilly, EMD Serono, GlaxoSmithKline, Hoffmann-La Roche, Janssen, Merck, Novartis, Pfizer, R-Pharma, SanofiServier, Sinergie, Sobi and Takeda., Speakers bureau: Received honoraria for consultancies or speaker bureaus (< 10.000 USD each) from the following pharmaceutical companies in the past 3 years: Ablynx, AbbVie, Astrazeneca-Medimmune, Biogen, Boehringer, Bristol-Myers Squibb, Eli-Lilly, EMD Serono, GlaxoSmithKline, Hoffmann-La Roche, Janssen, Merck, Novartis, Pfizer, R-Pharma, SanofiServier, Sinergie, Sobi and Takeda., Marco Gattorno Grant/research support from: MG has received unrestricted grants from Sobi and Novartis

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OP0259

OVERWEIGHT AND OBESITY IN PATIENTS WITH JUVENILE IDIOPATHIC ARTHRITIS ENROLLED IN THE GERMAN NATIONAL PAEDIATRIC RHEUMATOLOGIC DATABASE (NPRD)

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Background: Patients with juvenile idiopathic arthritis (JIA) may have a different body composition associated with reduced muscle mass and increased fat mass [1]. They display decreased physical fitness, perform less strenuous physical activities, and spend more time sleeping than do healthy children. A lower level of physical activity is associated with deconditioning and functional deterioration, favoring an inactive lifestyle. The risk of overweight might be further increased by the glucocorticoid treatment.
Objectives: Since obesity can increase inflammatory processes, cause early atherosclerotic changes and promote metabolic disorders, the objectives were a) to determine the prevalence of overweight and obesity in children and adolescents with JIA, and b) to examine the association between overweight and health-related parameters in this population.
Methods: A cross-sectional analysis of physicians' recorded body weights and heights of patients with JIA enrolled in the NPRD in the year 2016 was performed. Overweight was defined as BMI >90th sex- and age-specific percentile and obesity as BMI >97th percentile. For comparison with data from the general German population [2], patients aged 3 to 17 years were considered. A linear regression model was used to explore the association between overweight and both clinical as well as self-reported outcomes.
Results: In total, data from 6.860 children and adolescents with JIA (age 11.5 ± 4 years, disease duration 4.6 ± 3.6 years, 67% girls, 39% persistent oligoarthritis) were analyzed. Overweight was found in 14% (including 6% obesity) of JIA cases. Comparative data from the German general population report an overweight prevalence of 15% (including 6% obesity). In contrast to the general population, overweight rates in JIA differed between girls and boys (girls 14% vs. boys 16%, $p<0.05$). Patients with psoriatic arthritis (20%) and systemic JIA (18%) showed the highest overweight rates. In multivariate analyses, age (OR 1.06; 95%CI: 1.04-1.09), male sex (OR 1.21; 95%CI: 1.01-1.44), functional limitations (OR 1.29; 95%CI: 1.04-1.59), as well as therapy with biological DMARDs (OR 1.48; 95%CI: 1.22-1.80) and systemic glucocorticoids (OR 1.40; 95%CI: 1.14-1.71) were significantly associated with overweight.
Conclusion: The prevalence of overweight and obesity in young patients with JIA is similar to that of children and adolescents in the general population. The overweight rate increases with age and is strongly associated with functional restrictions and treatment with glucocorticoids. The role of overweight in the long-term outcome of JIA is an issue that still needs to be addressed.

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OP0260

VACCINATION SAFETY AND COVERAGE IN AN ITALIAN COHORT OF AUTOINFLAMMATORY DISEASES

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Background: Vaccine-preventable diseases are again emerging in our population after anti-vaccine campaign has started. In autoinflammatory diseases (AID), vaccine triggered-disease is a well known phenomenon for Hyper-IgD/Mevalonate-Kinase Deficiency (MKD). In CAPS, severe flares have been experienced after pneumococcus vaccine, while PFAPA patients did not achieve sufficient and protective levels of antibodies. This evidence has raised doubts in physicians and families about the safety of vaccines.
Objectives: To evaluate, in a cohort of italian AID, the vaccination coverage of the Italian Vaccination Schedule and the prevalence of adverse reactions and disease flares induced by vaccinations.
Methods: An anamnestic questionnaire was applied to AID patients refering to the AID Unit of the Istituto Giannina Gaslini from August 2017 to August 2018. Acquired data were revised for quality of information. Data about disease triggers in AID were obtained from the EUROFEVER registry for statistical reference.
Results: Triggers in AID Eurofever Registry: In august 2018 a total of 3783 patients were enrolled in the EUROFEVER registry (1908 female, 50,43%). The mean age of symptoms at disease onset was 7.04 +/- 9,48 SD yrs, (minimal 0 - maximum 75,92 yrs). The distribution among the periodic hereditary fevers was: 28,75% FMF (n=1081); 17,66% PFAPA (n=666); 9% Undefined inflammatory disease (UND n = 347); 7,85% CAPS (n=297); 7,16% TRAPS (n=271) and 5,39% MKD (n=204). Vaccines triggered the disease in 70% of the MKD, while PFAPA, TRAPS and UND had a rate of reactions of 20%. This was also found in 12.34% of CAPS, whereas FMF and inflammatory bone disorders had a rate of 6% and 3%, respectively. Excluding other causes of reactions, and isolating just vaccines as a cause, MKD had a higher percentage of reactions (7,14%), while PFAPA and UND had 1% and CAPS, TRAPS, FMF and inflammatory bone disorders had less than 1%. Triggers in IGG cohort: 150 questionnaires were distributed with 70% rate of response. Quality of data was 100% for coverage and adverse reactions. 105 patients were identified: PFAPA (n=26); CAPS (n=5); TRAPS (n=6); FMF (n=14); MKD (n=8); Inflammatory Bone Disorders (CRMO and PAPA, n=4) and UND (n=41). Rate of coverage was lower than 90% for Hib3 (83,11%), MMR/MMRV (88,9%) and for Rota C (1,85%). For DTP3, Hep3, PCV3 and IPV the rate of coverage was higher than 90% for all vaccines. 11 moderate/severe reactions were observed as following: 5 after DTPA+IPV (1 PFAPA; 2 TRAPS, 1 MKD and 1 UND); 1 after Hib (PFAPA); 1 after P10/13 (PFAPA); 4 after MPR (1 PFAPA, 1 TRAPS, 1 MKD and 1 UND). The general rate of severe reactions/shot was 6,36 for 1000 shots and no severe infection, death, persistent or significant disability or life-threatening condition was observed. Just one MKD patient had a severe disease flare requiring hospitalization following pneumococcal vaccine.
Conclusion: Data show that in AID patients vaccines may more frequently trigger the disease. Therefore, vaccination in AID may be cosidered a peculiar public health problem. Specific recommendations for vaccination in AID are warranted as well as further investigations for immunologic protection.

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Epidemiology

OP0261

RISK OF NEUROLOGICAL ADVERSE EVENTS DURING TUMOUR NECROSIS FACTOR INHIBITOR TREATMENT FOR ARTHRITIS: A POPULATION-BASED COHORT STUDY FROM DANBIO AND ARTIS

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Background: Tumor necrosis factor alpha inhibitors (TNFi) have successfully been used for the treatment of immune-mediated inflammatory disorders including rheumatoid arthritis (RA), psoriatic arthritis (PsA) and ankylosing spondylitis (AS) since 1998. However, several case reports and series have indicated that different neurological disorders including multiple sclerosis (MS), inflammatory neuropathies, demyelinating diseases and optic neuritis may be a serious, although rare, adverse event following TNFi treatment. The relationship is complex, as some studies show that RA is protective of MS and vice versa.
Objectives: To investigate the association between new-onset neurological events following TNFi treatment in arthritis patients compared to non-TNFi-treated arthritis patients from Denmark and Sweden.
Methods: 40,927/62,702 patients registered with a diagnosis of either RA, AS or PsA in DANBIO/ARTIS between January 1, 2000 and January 20, 2017 were included. Complete follow-up on mortality, emigration and incident neurological diseases suspected to be associated with use of TNFi until May 10, 2017 were obtained by linkage to the Danish and Swedish National Patient Registry and the Civil Registration Systems. Cox proportional hazard models were used to examine the association between use of TNFi and risk of a neurological event.
Results: The DANBIO/ARTIS arthritis cohorts contributed 612,347 person-years of observation and 221 patients were diagnosed with demyelinating disease or inflammatory neuropathy during follow-up with 117 cases among TNFi-treated patients and 104 cases among non-TNFi-treated patients. TNFi treatment among RA patients was not associated with an increased risk of a neurological event (DANBIO: HR=1.09, 95% Confidence Interval (CI) 0.60-1.99)/(ARTIS:HR=0.83, 95%CI 0.52-1.35) adjusted for age, gender and year of inclusion. However, TNFi-treated PsA and AS patients had an increased risk of neurological events (DANBIO:HR=2.57, 95%CI 1.17-5.65)/(ARTIS:HR=2.17, 95%CI 0.88-5.35). In TNFi-treated PsA/AS patients, 7 cases of inflammatory polyneuropathies were observed in DANBIO/ARTIS respectively versus 1 and 0 cases among non-TNFi treated. In on-drug models, the HR for neurologic events was 1.17 (ARTIS 95% CI: 0.41-3.35) and 1.66 (DANBIO 95% CI: 0.70-3.92) in PsA/AS.
Conclusion: The use of TNFi for the treatment of arthritis may be associated with increased risk of demyelinating disease or inflammatory neuropathies among patients with PsA and AS. Since these events are rare, larger multicentre studies are warranted to further characterize the risk.
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Disclosure of Interests: Tine Iskov Kopp : None declared, Elizabeth Arkema: None declared, René Cordtz: None declared, Bénédicte Delcoigne: None declared, Johan Askling Grant/research support from: Karolinska Institutet (JA) has or has had research agreements with the following pharmaceutical companies, mainly in the context of the ATRIS national safety monitoring programme for rheumatology biologicals: Abbvie, BMS, MSD, Eli Lilly, Pfizer, Roche, Samsung Bioepis, and UCB., Consultant for: Karolinska Institutet has received remuneration for JA participating in ad boards arranged by Lilly, Novartis, and Pfizer., Lene Dreyer Consultant for: MSD, UCB and Janssen Pharmaceuticals, Speakers bureau: MSD, UCB and Janssen Pharmaceuticals, Speakers bureau: UCB, MSD, Eli Lilly and Janssen Pharmaceuticals.
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