

the visual analogue scale of first consultation was from 5.4, to a decrease to 4.0 in the last.

Conclusion: Therapeutic success depends on the influence of multiple factors. The present study demonstrates the difficulty of following the treatment, which was highest among pediatric rheumatology follow up. This difficulty is less frequently observed in other therapeutic modalities. We observed a decrease in the average pain score, which indicates the success of the treatment. However, success exists only in those who had good adherence.

Disclosure of Interest

None Declared

P370

Brain activation in adolescents with idiopathic musculoskeletal pain: differences between predictable and unpredictable stimuli

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Introduction: Idiopathic musculoskeletal pain (IMP) affects approximately 12-35% of children and adolescents in school age. The negative impact of this condition in the quality of life is high, mainly in the physical, emotional, social and scholar aspects. It's etiopathogeny remains unknown and comprises several hypothesis. Some studies about functional magnetic resonance (fMRI) showed that adult patients with musculoskeletal pain syndromes tolerate a smaller amount induced pain (produced by pressure stimuli) and exhibit differences in brain activation patterns in pain-related areas. However, there are no studies using fMRI in pediatric patients with IMP.

Objectives: The aim of this study was to evaluate, through fMRI techniques, brain activation in adolescents with IMP during an experimental paradigm of pain.

Methods: 10 adolescents with IMP followed in a multiprofessional pain clinic in a tertiary hospital and 10 healthy adolescents, aged 14 to 17 years, were included in the protocol. The fMRI tests were performed in 3 T scanner (Magnetom Trio, Siemens) with an event-related design paradigm, factorial and with parameterization of the conditions of each stage/task. Pressoric stimuli were performed in nondominant hand thumb, divided into two parts: fixed predictable and variable unpredictable pain. Data were processed and analyzed by the FSL software.

Results: The IMP group showed a reduced pain threshold (IMP = 3.7 kg/cm² versus Healthy adolescents = 4.45 kg/cm², p = 0.005). The intragroup analysis results showed that the IMP group presented greater brain activation during the variable unpredictable pain stimuli paradigm, especially in the lingual gyrus (p = <0.001), frontal lobe and precentral gyrus (p = <0.001e p = 0.03) and temporal gyrus (p = <0.001) when compared to fixed predictable pain stimuli. IMP adolescents showed greater activation during variable unpredictable pain stimuli especially in areas related to processing of emotional information, decision-making, executive functions and areas of somatosensory integration.

Conclusion: Based on these results, it is reasonable to assume that several brain areas correlated to cognitive, emotional and behavioral aspects, related to pain perception in comparison were recruited longer than expected in IMP adolescents when compared to the same brain areas from adolescents without chronic pain.

Disclosure of Interest

None Declared

P371

Experience of a pediatric musculoskeletal pain clinic: demographic and clinical data

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Introduction: Many children and adolescents are referred to Pediatric Rheumatology clinics for evaluation of musculoskeletal pain without apparent cause. In these cases the pain may be localized or diffuse. The treatment of the patients should be individualized and it generally involves the participation of a multiprofessional trained team, who gives orientation to the patients and their families with regard to and pain coping and control. The number of specialized pain clinics is low, especially in countries with low-income population.

Objectives: To present the demographic and clinical features of patients followed in the first specialized musculoskeletal pain clinic of a public university hospital in our country.

Methods: Data from medical records of patients who were referred and followed in the pain clinic were included into a spreadsheet. Only patients consulted by doctors on two or more occasions were taken into account. Furthermore, we evaluated the recorded data in the multidisciplinary clinic system.

Results: Results: 263 patients were referred for musculoskeletal pain clinic. Of these, 99 patients (37.6%) were not consulted or had only a medical evaluation. In 6 cases there were problems in the filling in of the data and the patients were excluded. Thus, we included 164 patients for the statistical analysis, 121 (73.8%) female and 43 male (26.2%). The duration between onset of symptoms and the first visit in the pain clinic was about 2.4 years. The average age in the first consult was 10.6 years, ranging from 3 to 17 years, and the average follow-up time was 3.1 years. Regarding the diagnosis, 127 patients (77.4%) presented pain amplification syndromes, 34 (20.7) fulfilled the ACR fibromyalgia criteria, 32 (14.0%) presented joint hypermobility, 12 (7.3%) had orthopedic problems, 6 (3.6%) complex regional pain syndrome and 5 (3%) presented temporomandibular joint dysfunction 5. With respect to comorbidities, 4 showed obesity (2.4%) and one hypothyroidism. 39.4% of the patients presented arthralgia, but no patient developed arthritis. 62.8% reported headache, 32.9% abdominal pain and 38.0% sleep problems. The average pain VAS score was 5.4 (0 - 10).

Conclusion: As in the literature, most patients were female and there was a delay in the appointment of the first consult in the pain clinic. Headache was the most common symptom in addition to musculoskeletal pain.

Disclosure of Interest

None Declared

P372

New diagnostic criteria of acute rheumatic fever: prevalence of silent carditis in a pediatric population

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Introduction: Acute rheumatic fever and its sequel, chronic rheumatic heart disease, are important global health issues with an annual incidence of about 500.000 new cases and a prevalence of 34 million people worldwide affected by rheumatic heart disease. During the 20th century the incidence of ARF and the prevalence declined substantially in Europe, North America, and developed nations in other

geographic locations. In Italy the incidence is about 4,1:100,000. Acute rheumatic fever is a systemic inflammatory response to group A streptococcal infection, which typically affects children and occurs two or three weeks after a throat infection. Although arthritis is the most common sign, carditis which commonly affects the mitral and aortic valves, is the most specific and severe one, for the eventual risk of chronic rheumatic cardiopathy. Other less common clinical features include chorea, rash (erythema marginatum), and subcutaneous nodules. Diagnosis requires demonstration of the presence of major and minor criteria and laboratory evidence of a recent streptococcal throat infection. In the 1992 AHA revised Jones criteria statement, the diagnosis of carditis was clinical, based on the auscultation of typical murmurs that indicate mitral or aortic valve regurgitation. The Australian and New Zealand Diagnostic Criteria, published on Circulation in 2015, extend the 1992 Jones criteria for acute rheumatic fever by including echocardiographic evidence of silent carditis and a wider spectrum of joint manifestations as major criteria. Sub-clinical carditis is characterised by the absence of classic auscultatory findings of valvular dysfunction and the by the echocardiographic evidence of mitral or aortic valvulitis.

Objectives: The aim of our study was to define the prevalence of silent carditis in a casistic of pediatric patients affected by Acute Rheumatic fever followed from 2012 to 2016.

Methods: The study included 18 patients who were diagnosed with ARF according to the Jones criteria. The patients with echocardiographic findings of carditis and no clinical signs of cardiopathy, were diagnosed as having SC. Silent carditis was defined as the presence of the following findings on Doppler echocardiography: isolated mild mitral or aortic regurgitant jets. The patients diagnosed with subclinical carditis were followed up and re-evaluated at 3, 6, and 12 months.

Results: Acute rheumatic fever was diagnosed in 18 patients, and 7 of these (40%) had silent carditis (two patients also had chorea). All patients who underwent diagnosis of SC had C-Reactive protein values greater than upper limit of normal for laboratory. Our patients had an average age, at the time of diagnosis, of 7,4 years old. The echocardiography/Doppler findings were: isolated mild mitral regurgitation in 6 patients and isolated mild aortic regurgitant jets in one patient. We observed a complete recovery in two patients with mitral insufficiency and in the case of aortic regurgitation. All patients receive prophylaxis therapy with benzilpenicillin each 21 days.

Conclusion: The high prevalence (42%) of silent carditis in our casistic emphasize the role of Doppler echocardiography in patients who undergo suspected diagnosis of acute rheumatic fever, for an early detection of silent carditis. Patients afferring to a third-level reference center could have a more severe disease causing an eventual selection bias in collecting our data. We also observed an high prevalence of recovery (42%) from silent carditis, during the follow up.

Disclosure of Interest

None Declared

P373

Children with cystic fibrosis and musculoskeletal complaints seen in the rheumatology clinic: a single centre experience

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Introduction: Musculoskeletal and rheumatic manifestations of cystic fibrosis (CF) are well described, including cystic fibrosis-related arthropathy (CFA), hypertrophic pulmonary osteoarthropathy (HPOA), antibiotic associated arthralgia (particularly ciprofloxacin-related arthropathy), osteopaenia and osteoporosis, as well as coincidental incidence of rheumatic conditions such as juvenile idiopathic arthritis and biomechanical issues such as postural abnormalities.(1) The prevalence of musculoskeletal symptoms in CF patients increases

with age and occurs more frequently in adults, however children may also suffer from musculoskeletal complications of CF.(1)

Objectives: To describe the cohort of children with cystic fibrosis referred to the rheumatology clinic at our tertiary paediatric centre with musculoskeletal symptoms over an eleven-year period.

Methods: A search of the rheumatology department electronic clinic letter database was performed using the search terms 'cystic fibrosis' and 'CF' for an 11 year period from January 2004 to April 2016. Identified cases were then reviewed using a combination of clinic letters and clinical notes from the medical records.

Results: 26 patients were identified; 54% were female (n = 14) with a median age of 11 years (range 3-17 years) at first referral to Rheumatology. The median duration of musculoskeletal symptoms prior to assessment in the rheumatology clinic was 6.5 months (range 0.5-24 months). The commonest presenting symptoms were joint pain 81% (n = 21), joint swelling 27% (n = 7), limp or non-weight bearing 15% (n = 4) and back pain 15% (n = 4). The commonest diagnoses were non-specific musculoskeletal pain (e.g. Associated with hypermobility, mechanical or postural issues) 42% (n = 11), CFA 31% (n = 8) and reactive arthritis 12% (n = 3). Two patients had a diagnosis of possible juvenile idiopathic arthritis, with CFA as the differential diagnosis. Diagnoses were considered to be directly (e.g. CFA) or indirectly (e.g. reactive arthritis, ciprofloxacin-related arthropathy) related to the patient's CF diagnosis in 46% (n = 12) of cases. Other diagnoses were Perthe's disease, growing pains, patellofemoral dysfunction, complex regional pain syndrome, avascular necrosis of the hip, congenital elbow dislocation and Osgood-Schlatter disease. Five children had more than one musculoskeletal diagnosis. No patients were diagnosed with HPOA.

Conclusion: CFA was the second commonest diagnosis among our cohort; many patients in our cohort had musculoskeletal symptoms unrelated to CF. As musculoskeletal complaints in children and adolescents are a common cause for presentation to medical services (2), it is unsurprising that children with CF suffer from musculoskeletal issues seen in the general population, as well as those associated with CF. No patients in our cohort were diagnosed with HPOA. As the median age of onset of HPOA is 20 years(3), the lack of HPOA cases may reflect the improved respiratory health of the patient cohort compared to historical cohorts where HPOA was commonly reported.

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Disclosure of Interest

None Declared

P374

Vitamin D levels in a large cohort of patients with pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS): a possible role in neurological disorders?

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Introduction: Vitamin D (vitD) is known for its essential role in calcium homeostasis and bone health. It is now considered as a potent neurosteroid hormone, with a pivotal role on the brain development and normal brain function. VitD ligand-receptor, a receptor that mediates the majority of vitamin D biological actions, has been found