Paediatric rheumatology

AB1412 THE DAMAGE OF JUVENILE IDIOPATHIC ARTHRITIS IN ADULT PATIENTS

Keywords: Outcome measures, bDMARD, Disease-modifying Drugs (DMARDs)

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Background: Juvenile idiopathic arthritis (JIA) is the most common disease in pediatric rheumatology. After transition, chronic active JIA requires continuing treatment. Little is yet known about the JIA activity in adult patients.
Objectives: To assess disease activity, treatment and comorbidities in adult patients with JIA between 2000 and 2022 at the University Hospital of Heidelberg.
Methods: This is a monocentric, retrospective analysis of adult patients with onset as JIA. The electronic medical records were analyzed from the first to the last documented visit in our center. Prognostic factors for disease activity in adults were determined using Fisher's exact test, chi-square test and cross tables.
Results: Until March 2022, 172 JIA patients with a median age of 27.7 years (range 18.1 to 78.4) and a median disease duration of 19.4 years (range 1.3 to 68.8) at their last visit were identified. Oligoarticular (oligo-) (n=36, 20.9%), extended-oligo (ext-oligo-) (n=28, 16.3%) and polyarticular (poly-) (n=61, 35.5%) were the largest JIA subgroups. Females (n=134, 77.9%) were more prevalent than males (n=38, 22.1%) (p<0,001). The prevalence of uveitis was 27.9% (n=48). Patients with RF+ poly-JIA (n=17, p<0,001) or initiation of MTX after 2 years (n=41, p=0,006) or bDMARD after 3 years (n=44, p<0,001) of disease onset were associated with significantly more erosive joint damage. Patients with late MTX and/or bDMARD initiation (n=190) had more frequently osteoporosis (n=48, p=0,011, p=0,012) and required more frequently total joint replacement (n=41, p=0,012, p=0,04). Radiological joint damage was more prevalent in patients with a disease onset before the year 2000. At the last documented visit 51.8% of patients (n=72) were in SDAI and DAS28 remission.
Conclusion: The delay of MTX and bDMARD therapy in patients with active JIA was associated with erosive joint damage, total joint replacement and osteoporosis. The JIA onset before the year 2000 was associated with significantly more joint damage and a lower prevalence of remission.
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AB1413 ASSESSMENT OF FATIGUE IN YOUNG ADULTS WITH JUVENILE IDIOPATHIC ARTHRITIS

Keywords: Osteoporosis, Sarcopenia, Mental health

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Background: Fatigue is a common and frustrating symptom in many chronic inflammatory diseases, including juvenile idiopathic arthritis (JIA), impacting all parts of daily life.
Objectives: This study aims to determine the prevalence of fatigue in young patients with JIA and to analyze its correlation with clinical characteristics of the disease, body mineral content (BMC), and bone mass density (BMD).
Methods: Cross-sectional study included young adults with JIA according to ILAR criteria, disease duration ≥3 years. Exclusion criteria: age<18 and >44 years, the presence of any comorbidity that could be accompanied by fatigue (diabetes, chronic kidney disease, neuropathy, obesity, chronic obstructive pulmonary disease, infections, malignancy). Demographic data and the following clinical parameters were collected: pain Visual Analog Scale (VAS) measured by patients and doctors, tender joint count (TJC), swollen joint count (SJC), erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), Disease Activity Score 28 (DAS28), Juvenile Arthritis Disease Activity Score (JADAS27), health assessment questionnaire (HAQ), Juvenile Arthritis Damage Index-articular (JADI-A) and Juvenile Arthritis Damage Index-extra-articular (JADI-E). BMC and BMD were determined using dual photon X-ray absorptiometry (DXA). Fatigue was assessed using the Functional Assessment of Chronic Illness Therapy – Fatigue (FACIT-F) short 13-item questionnaire validated in RA. Fatigue was considered mild if the FACIT-F score was ≥40, moderate if 20≤FACIT-F<40, and severe if 0≤FACIT-F<20. A p-value lower than 0.05 was considered significant.
Results: We included 40 patients with JIA (24 women and 16 men) with a mean age of 24.4±5. The mean disease duration was 13,8±8,1 years. The mean pain VAS measured by the patient was 38,8±3,4; the mean pain VAS measured by the doctor was 33,6±4,1; the mean TJC and SJC were 4,2±4,9 and 1,9±3,2, respectively. The mean levels of ESR and CRP were 20,2±2,7 mm/h and 26,1±7,0 mg/l, respectively. The mean DAS28-ESR was 3,6±1,5, the mean JADAS27 was 13,3±8,7, and the mean HAQ score was 0.60±0.6. The mean FACIT-F score was 30.1±12.4. Fatigue was mild in 37.5% (15 patients), moderate in 35% (14 patients), and severe in 27.5% (11) of patients. A significant negative correlation was noted between the FACIT-F score and the following parameters in JIA patients: disease duration (r=-0.436, p<0.001), articular and extra-articular damage obtained by JADI-A and JADI-E indices (r=-0.393, p=0.01, r=-0.440, p=0.05, respectively), pain VAS obtained by a doctor (r=-0.358, p=0.02), but not with pain VAS obtained by the patient (r=-0.167, p=0.3), ESR (r=-0.503, p<0.001), but not with CRP (r=-0.157, p=0.3), DAS28-ESR (r=-0.414, p<0.05), JADAS27 (r=-0.391, p<0.01) but not with TJC (r=-0.080, p=0.8), and SJC (r=-0.239, p=0.2). FACIT-F score was positively associated with total BMD (r=0.364, p=0.2), femoral neck BMD (r=0.519, p=0.007), appendicular lean mass (r=0.666, p<0.001), total lean mass (r=0.622, p<0.001), and skeletal mass index (r=0.703, p<0.001), but not with HAQ (r=0.035, p=0.8).
Conclusion: In our study, moderate and severe fatigue among young patients with JIA was 35% and 27.5%, respectively. The fatigue was associated with disease activity, duration of disease, articular and extra-articular damage, total and femoral neck BMD, and lean mass.
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AB1414 PREDICTIVE FACTORS OF BIOLOGIC DISEASE-MODIFYING ANTI-RHEUMATIC DRUGS (BDMARD) USE IN JUVENILE IDIOPATHIC ARTHRITIS PATIENTS

Keywords: bDMARD

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Background: The advent of disease-modifying antirheumatic drugs (DMARDs), in the past two decades has been revolutionary in the treatment and prognostic outcomes of patients with Juvenile Idiopathic Arthritis (JIA). Since some patients have inadequate responses to conventional DMARDs, biologic DMARDs (bDMARDs) must be prescribed to guarantee the achievement of complete remission. Early and appropriate treatment can prevent joint destruction, loss of joint function and extraarticular manifestations, with subsequent less morbidity and mortality.
Objectives: To identify the JIA patients with a higher probability of requiring treatment with bDMARDs and to investigate the predictive factors.
Methods: A retrospective single-center study of patients with JIA followed in a tertiary Hospital was conducted. Sociodemographic, clinical, laboratory and treatment characteristics were collected from Portuguese Rheumatic Diseases Register and medical records. Statistic was performed with independent samples t-test, Mann-Whitney U test, chi-square test and Fisher's exact test. Statistical significance was set up at a p-value <0.05. A multivariate logistic regression analysis was performed to identify possible predictive factors for bDMARD use. Odds ratios (ORs) and 95% confidence intervals (CIs) were calculated.
Results: A total of 165 patients with JIA (107 females, 64.8%) were included. Seventy-five patients had oligoarthritis (45.6%, 62 had persistent oligoarthritis and 13 had extended oligoarthritis), 17 psoriatic arthritis (10.3%), 30 rheumatoid factor (RF)-negative polyarthritis (18.1%), 6 RF-positive polyarthritis (3.6%), 14 systemic arthritis (8.5%) and 23 enthesitis related arthritis-juvenile spondyloarthritis (13.9%). Fourty-five patients were treated with bDMARD (27.3%). Males were treated more frequently with bDMARDs than females (p=0.058). Regarding JIA subtype, more RF-positive polyarthritis patients needed bDMARDs to achieve remission (p=0.027). Likewise, concerning disease activity, JIA patients with higher C-reactive protein (CRP) values were more frequent treated with bDMARDs (p=0.032), which was not verified for erythrocyte sedimentation rate (ESR). Uveitis was significantly more frequent in the bDMARD group (p=0.006). Moreover, more patients with bilateral involvement were treated with bDMARDs, compared with patients with unilateral uveitis (n=0.032). Nevertheless, no differences were found concerning age and number of joints involved at onset, disease duration and ANA positivity. In a multivariate regression model adjusted for gender, the presence of uveitis (OR 4.42, 95% CI 1.43 to 13.60, p=0.010) and polyarticular involvement (OR 6.62, 95% CI 2.05-21.43, p=0.002) remained statistically significant predictive factors for bDMARD use in patients with JIA.