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OP0057

EARLY TREATMENT WITH ANAKINRA IN SYSTEMIC JUVENILE IDIOPATHIC ARTHRITIS

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Background: Systemic juvenile idiopathic arthritis (sJIA) accounts for 10-20% of all patients with JIA. The prominent systemic clinical features, the marked elevation of inflammatory markers and the absence of autoantibodies make this disease different from other JIA forms. sJIA should be considered as a polygenic autoinflammatory disease. Interleukin 1 (IL-1) has been shown to be a major

mediator of the inflammatory cascade that underlies sJIA. Treatment with anakinra has been reported to be effective in a sizable portion of patients with sJIA.

Objectives: To assess clinical response rate and disease course in sJIA patients treated with anakinra. To evaluate whether the response to anakinra was related to baseline variables.

Methods: We reviewed 56 (28 F) consecutive patients with sJIA treated with anakinra for at least 6 months in our institution. The diagnosis of sJIA was established according to the International League of Associations for Rheumatology (ILAR) classification criteria. We analyzed the effect of anakinra on fever, rash, number of active joints, erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), white blood cells count, platelets count and ferritin levels. Clinically inactive disease (CID) was defined according to Wallace criteria. Clinical and laboratory data were obtained using a standard data collection form.

Results: The median age at the disease onset was 5.7 (IQR 2.9-10.2) years. The median time from onset to received anakinra was 1.9 (IQR 0.7-9.7) months. At baseline 52/56 (93%) of patients had fever and median number of active joints was 2 (IQR 1-4). After 6 months of treatment 39 patients (69.6%) met criteria for inactive disease. Among 56 patients 17 (30.3%) received anakinra in monotherapy and 39 (69.6%) received anakinra with glucocorticoids. There were no statistically significant differences between the two groups for demographic, clinical and laboratory features. 13/17 (76.4%) patients treated with anakinra alone and 26/39 (66.6%) patients treated with anakinra and glucocorticoids met criteria for CID off glucocorticoids at 6 months (p=0.54). Among the 56 patients, 29 (51.7%) received anakinra within 2 months from disease onset. There were no statistically significant differences for demographic, clinical and laboratory features among patients who started anakinra in the first 2 months from disease onset compared to those that started anakinra after 2 months. At 6 months after beginning of anakinra treatment, 27/29 patients (93.1%) who started anakinra within 2 months from disease onset and 12/27 (44.4%) who started anakinra after 2 months from disease onset reached clinical inactive disease off glucocorticoids (p=0.0001). Patients who started anakinra after the first 2 months from disease onset have a significantly higher risk of non-response (OR=8.06, 95% CI: 2.03-32.0).

Conclusion: According with several observations, anakinra is effective in a significant proportion of patients with sJIA. A possible approach to introduce IL-1 inhibitor, with or without concomitant glucocorticoids, early in the disease course taking advantage of a "window of opportunity" has been suggested. Our observation confirms that earlier treatment with anakinra is associated with a better short-term outcome. Moreover, our results show that beginning of treatment after two months of disease is correlated with a high risk of non-response.

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OP0058

DEVELOPMENT OF INFLAMMATORY BOWEL DISEASE DURING TREATMENT WITH ETANERCEPT IN PATIENTS WITH JUVENILE IDIOPATHIC ARTHRITIS

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Background: Juvenile idiopathic arthritis (JIA) has a reported prevalence varying from 16 to 150 per 100,000 patients and it thereby is the most frequent chronic rheumatologic disease presenting in childhood. Inflammatory bowel disease (IBD) is an auto-inflammatory disease that can develop in patients with JIA. Results from multiple studies suggest an association between therapy with Etanercept (ETN) and occurrence of IBD in patients with JIA, which may or may not be counteracted by methotrexate.

Objectives: The aim of this study was to describe characteristics of JIA patients who developed IBD and to evaluate a possible relationship between IBD onset and medication use at IBD onset.

Methods: Pharmachild, the largest international JIA registry, was used for this study. Patients were enrolled via members of the Paediatric Rheumatology

International Trials Organisation (PRINTO). The registry contains both retrospective and prospective data.

Results: A total of 8,309 patients were included in this study. 290 gastrointestinal disorders were reported in 260 patients. 50 cases in 47 patients were classified as IBD or suspected IBD.

Age at JIA onset was significantly higher in patients who developed IBD (9.1 vs 7.1 years $p=0.002$), and female predominance was lower (48.9% versus 67.6% $p=0.011$). Enthesitis related arthritis (ERA) was the JIA subtype in 40.4% of the patients who developed IBD.

In 14 out of 47 patients more detailed information about IBD disease onset was available, such as date of disease onset and medication used at that time. 71.4% of all 14 patients used etanercept and 50.0% used MTX 3 months prior or at IBD onset. Etanercept exposure prior to IBD onset varied from no exposure to 6.39 years with a median of 1.3 years. Methotrexate exposure prior to disease onset varied from no exposure to 8.10 years with a median of 2.9 years.

Information regarding quality of life was available for 2,752 patients of which 17 IBD patients. Quality of life, both physical and psychosocial, was significantly lower in patients who developed IBD patients ($p=0.018$ and $p=0.046$ respectively).

Conclusion: In this study ERA patients were more at risk of developing IBD and 71.4% used etanercept while developing IBD. We did not find a protective role of MTX since 50.0% of patients with available data developed IBD while using MTX. Lastly, IBD has an important physical and psychosocial impact on quality of life.

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OP0059

PERIARTICULAR GLUCOCORTICOID INJECTIONS: DELINEATING THEIR USE IN JUVENILE IDIOPATHIC ARTHRITIS

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Background: Glucocorticoid injections in periarticular sites (PAGI) such as tendons and bursae often complete the local treatment of active disease in juvenile idiopathic arthritis (JIA). However, the use of PAGI and their role in the achievement of disease remission has seldom been studied.

Objectives: To identify the clinical features of JIA patients treated with PAGI at the study center in a 6 years period, the sites most frequently injected, the frequency of and the time for achieving local remission.

Methods: Records of JIA patients treated with PAGI at the study center from 2012 were retrospectively reviewed. Demographic and clinical features, including ongoing systemic treatment, sites of injection, procedure setting, type and dosage of glucocorticoid injected, time to achieve local remission (complete or partial when one/some of the injected sites were in remission and one/some showed persistent synovitis), frequency of remission of the injected sites at the last follow-up and side-effects were recorded.

Results: In a total of 293 procedures 647 tendons and 26 bursae were injected in 191 patients. Most of the patients were females (74%), with ILAR oligoarticular JIA subtype (50% persistent, 23% extended), followed by RF-negative polyarthritis (23.2%), RF-positive polyarthritis (0.7%) and systemic JIA (1.3%), with a median age of 8.2 years (IQ 4.7-11.3) at the PAGI. All procedures were ultrasound-guided, 281 (96%) under general sedation. Acetate methylprednisolone was used in 96% of the procedures (average dosage 0.45 mg/kg/tendon, 0.89 mg/kg/bursa), whereas trimcinolone hexacetonide in 4%. In 255 procedures (87%) patients experienced remission in the injected sites after a median of 2.6 months (IQ 1.9-3.5). Forty-seven patients (24.6%) underwent to repeated injections in the same sites after at least 3 months from the 1st procedure. A total of 96 tendons and 9 bursae were re-injected during 69 procedures (23.5%). At the last follow up, after a median period of 29.4 months (IQ 15-45.48) from PAGI, patients experienced complete local remission in 259 (88.4%) injected procedures and partial local remission in 23 (7.8%). In 53 procedures with repeated injection(s) in the same site(s) (77%), patients were in local remission at the last follow up. In 77 procedures (26.3%) patients presented flare of disease in periarticular sites. Concerning concomitant therapy, at the time of each PAGI 115 patients (39.2%) were not on treatment, 137 (46.7%) were on methotrexate, 29 (9.9%) on methotrexate and biologics, 8 (2.7%) on biologics and 4 (1.5%) received others. Patients were started with a new treatment in around three months following 139 (47.4) procedures due to poor control of disease. In 156 (53.2%) procedures, patients experienced complete/local remission and maintained the same treatment before or after the injection at the last follow up in a median period of 20.8 months (IQ 12.67-39.35). Of notice, 81.4% of patients who experienced complete remission following the injection were not on concomitant treatment; 85.9% of patients who experienced complete remission at the last follow up did not receive concomitant treatment. In 24 injection procedures (8.2%) patients showed only mild local side effects (atrophy and hypopigmentation).

Periarticular sites	N. injections (%)
Total	673(100%)
Tendons	647 (96.1%)
Posterior tibialis tendon	194 (30%)
Flexor digiti propri tendons (I-V)	152 (23.5%)
Peroneals	123 (19%)
Others	178 (27.5%)
Bursae	26 (3.9%)
Deep infrapatellar bursa	11 (42.3%)
Retrocalcaneal bursa	4 (15.4%)
Baker's cyst	4 (15.4%)
Others	7 (26.9%)

Conclusion: PAGI are a safe option in the management of JIA. In our cohort, patients treated with PAGI had more frequently persistent oligoarticular JIA subtype; acetate methylprednisolone was by far the most frequently used glucocorticoid. In 88.4% procedures patients experienced remission at last follow up. However, further investigations are mandatory to assess the role of concomitant therapy in achieving and maintaining remission.

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