AUTO-IMMUNE AND INFLAMMATORY DISEASES IN CHILDREN WITH SICKLE CELL DISEASE: DIAGNOSTIC AND THERAPEUTIC ISSUES

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Background: Coexistent auto-immune and inflammatory diseases (AID) and sickle cell disease (SCD) have been recently described in adults and children, however their frequency and physiopathology remain unclear (1-6).

Objectives: The aim of this study is the analysis of clinical and biological characteristics at AID diagnosis and the evolution under treatment in children with SCD.

Methods: Between May 1991 and March 2018, 35 of 3,800 SCD children diagnosed with AID in seven hospitals in Paris and suburb were analyzed in a retrospective survey.

Results: Thirty-five patients reported 44 AID: auto-immune liver disease (AILD, n=13), inflammatory bowel disease (IBD, n=7), juvenile idiopathic arthritis (JIA, n=6), systemic lupus erythematosus (n=5), autoimmune hemolytic anemia (n=3), Sjögren’s syndrome (n=2), histiocytic necrotizing lymphadenitis (n=2), vasculitis (n=2), myasthenia gravis (n=2), sarcoidosis (n=2), inflammatory uveitis (n=1), scleroderma/juvenile dermatomyositis (n=1). Median age at diagnosis was 10 [2 - 18] years. The mean delay between first symptom and diagnosis was 15.5 ± 29 months. The time of diagnosis was significantly longer for patients with JIA compared to other AID (63 versus 10 days, p=0.004). Sixteen patients (45.7%) had hypergammaglobulinemia > 20 g/L at diagnosis. AILD had a hypergammaglobulinemia at the time of diagnosis (30.0g/L), with a statistically significant decrease at the end of follow-up (18.2g/L, p=0.0048). Among 21 patients (60%) treated with systemic steroids, it triggered vaso-occlusive attack. Thirteen of 35 patients (37.1%) were managed with biotherapy for AILD, well tolerated. Three patients (8.6%) underwent stem cell transplantation, one died of a cortico-resistant and multipolar graft versus host reaction, two were cured of both AILD and SCD. Nine severe infections were reported, four under steroids, five under biotherapy.

Conclusion: Diagnosis and therapeutic care of coexistent auto-immune and inflammatory diseases are difficult and challenging in children with SCD. Annual monitoring of inflammatory markers could be recommended to detect AILD earlier and prevent diagnostic delay in case of high ascension in SCD patients.

REFERENCES

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**AB1072B**

The Consequences of the Provisional Paediatric Rheumatology International Trials Organisation Juvenile Idiopathic Arthritis Classification Criteria

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**Background**

Last year the International League of Associations for Rheumatology (ILAR) criteria for juvenile idiopathic arthritis (JIA), [1] were challenged by the provisional Paediatric Rheumatology International Trials Organisation (PRINTO) classification criteria,[2] Four disorders were proposed: (a) systemic JIA; (b) rheumatoid factor (RF)-positive JIA; (c) enthesitis/ spondylitis-related JIA; and (d) early-onset antinuclear antibody (ANA)-positive JIA. Early-onset ANA-positive JIA is defined by: arthritis for ≥ 6 weeks, and early-onset (≤ 6 yrs), and presence of 2 positive ANA tests with a titer ≥ 1/160 at least 3 months apart with the exclusions of having systemic JIA, RF-positive arthritis, or enthesitis/ spondylitis-related JIA.

**Objectives**

To evaluate the shifts from the original subtypes of JIA in the new disorder of early-onset ANA-positive JIA.

**Methods**

This study used data from the international PRINTO based registry regarding pharmacovigilance in JIA called Pharmachiid.[3] For this analysis we used the data of 4,165 patients completely categorized following the ILAR ‘oligoarthritis’, ‘RF-negative polyarthritis’, ‘psoriatic arthritis’ and ‘undifferentiated JIA (UIJIA)’ subtypes and with complete determination of ANA status. These patients were if possible reclassified in the early-onset ANA-positive JIA according to the provisional PRINTO classification criteria.

**Results**

Table 1 shows the characteristics of all 4,165 patients according to the anatomical classification of uveitis.

**Table 1. Characteristics of patients according to the anatomical classification of uveitis.**

<table>
<thead>
<tr>
<th>Category</th>
<th>Total number of patients (n)</th>
<th>Persistent QUA</th>
<th>Extended QUA</th>
<th>RF negative QUA</th>
<th>Psoriatic arthritis QUA</th>
<th>UIJIA QUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of patients</td>
<td>4,165</td>
<td>1283 (30.8%)</td>
<td>665 (15.9%)</td>
<td>1665 (40.6%)</td>
<td>210 (5.0%)</td>
<td>344 (8.3%)</td>
</tr>
<tr>
<td>Age of disease onset, years (IQ)</td>
<td>4 (2.5-8.3)</td>
<td>6 (3.7-21.3)</td>
<td>6.7 (2.3-11.3)</td>
<td>8.6 (3.4-13.3)</td>
<td>5.7 (2.6-10.8)</td>
<td></td>
</tr>
<tr>
<td>Female, n (%)</td>
<td>968 (77.6%)</td>
<td>541 (43.1%)</td>
<td>1283 (77.1%)</td>
<td>145 (6.0%)</td>
<td>228 (63.9%)</td>
<td></td>
</tr>
<tr>
<td>ANA positive, n (%)</td>
<td>428 (34.0%)</td>
<td>203 (16.4%)</td>
<td>388 (31.6%)</td>
<td>51 (24.6%)</td>
<td>127 (26.9%)</td>
<td></td>
</tr>
</tbody>
</table>

**Conclusion**

This study shows that all ANA-positive JIA patients belonging to the ‘oligoarthritis’, ‘RF-negative polyarthritis’, ‘psoriatic arthritis’ and ‘UIJIA’ ILAR subtypes, 74.8% met the criteria for the PRINTO ‘early onset ANA-positive’ category. The female proportion was higher than in any ILAR subtype being 83.0%. This new category consists largely of 3 ILAR subtypes: persistent oligoarthritis (34%), extended oligoarthritis (25%) and RF negative polyarthritis (28%). Further studies on these provisional criteria are ongoing.

**REFERENCES**


Disclosure of Interests Vera Mars: None declared, Joost F. Swart: None declared, Gabriella Giancane: None declared, Sytze De Roode: None declared, Anne Estmann: None declared, Marija Jelic: None declared, Estefania Moreno Ruizfa: None declared, Jaime de Inocêncio: None declared, Jelena Vojinovic: None declared, Agustin Remesal: None declared, M Laday: None declared, Rolando Cima: None declared, A V. Cochoino: None declared, Inmaculada Calvo: None declared, Nico Wulffraat: None declared, Nicolino Ruperto: Grant/research support from: received research grants from Pfizer, Roche, Novartis, Clementia, Sanofi, MSD, BMS and GSK, Consultant for: Advisory boards: Novartis, AbbVie, Speakers bureau: AbbVie, Roche, Novartis, SOBI, M Harjacek: None declared, Nico Wulffraat: None declared, 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, 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: Abyln, AbbVie, Astrazeneca-Mediimmune, Biogen, Boehringer, Bristol-Myers Squibb, Eli-Lilly, EMD Serono, GlaxoSmithKline, Hoffmann-La Roche, Janssen, Merck, Novartis, Pfizer, R-Pharma, SanofiServer, 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: Abyln, AbbVie, Astrazeneca-Mediimmune, Biogen, Boehringer, Bristol-Myers Squibb, Eli-Lilly, EMD Serono, GlaxoSmithKline, Hoffmann-La Roche, Janssen, Merck, Novartis, Pfizer, R-Pharma, SanofiServer, Sinergie, Sobi and Takeda.

**AB1072C**

Children with Juvenile Idiopathic Arthritis: The Correlation Between Carotid Intima-Media Thickness and Markers of Inflammation to Determine Pre-Clinical Atherosclerosis

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**Background**

Juvenile idiopathic arthritis (JIA) is the most common chronic rheumatic disease in childhood. JIA is a heterogeneous group of disorders with different disease progression and prognosis. Cardiovascular...