DEVELOPMENT OF A SCORE FOR THE DIAGNOSIS OF INFECTIOUS ARTHRITIS IN DIFFICULT TO PUNCTURE JOINTS

C.A. Gullén-Astele, B. Blanco Cáceres. Rheumatology Department, Ramon y Cajal University Hospital, Madrid, Spain

Background: In previous studies, we have demonstrated the benefit of the determination of serum procalcitonin in the diagnostic differentiation between gouty and an infectious monarthritis. On the other hand, the utility of this analyte has been suggested in the diagnostic study of monarthritis in which the obtention of joint fluid for lab analysis is difficult or impossible in the immediate grey.

Objectives: The objective of this study is to perform the validation of a score to determine the diagnosis of Native Joint Septic Arthritis (ASAN) in difficult to puncture joints.

Methods: A logistic regression study was conducted using 37 cases of ASAN (sternoclavicular, acromioclavicular, coxofemoral, intratarsal, and metatarsophalangeal) and 160 of non-infectious arthritis diagnosed as such between 2013 and 2016 by microbiological criteria, the presence of crystals or absence of both situations. The explanatory variables were: Three age strata, three CPR levels, three strata of PCT figure, immunomodulation/immunosuppression condition, two strata of time of evolution, the presence of fever and neutrophilia. After a forward modeling, a test validation study was performed using the modeling coefficients as a weight reference for each value of the score.

Results: The only variables that overcame the forward modelling were PCT, temperature, immunosuppression and time of evolution. Using the reference coefficients (table 1), validation tests were performed by means of the ROC curve. According to the established curve, a sensitivity of 86.6% and specificity of 95.8% is reached if the total score reaches or exceeds 5pts (Strata of PCT 6, 4 and 2, and 2 points by any of the remaining three considerations). The total area under the curve was 0.926.

Abstract SAT0393 – Table 1. Results of the multivariable logistic regression backward modeling.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>E.E.</th>
<th>Wald</th>
<th>p-value</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCT &gt; 1.44 g/ml</td>
<td>5.8412</td>
<td>1.0231</td>
<td>32.5971</td>
<td>&lt; 0.0001</td>
<td>0.4010</td>
</tr>
<tr>
<td>PCT &lt; 1.0 – 1.44 g/ml</td>
<td>5.2632</td>
<td>1.9117</td>
<td>7.5798</td>
<td>0.0059</td>
<td>0.1712</td>
</tr>
<tr>
<td>PCT &lt; 0.5 – 1.44 g/ml</td>
<td>4.4626</td>
<td>1.7378</td>
<td>7.1983</td>
<td>0.0073</td>
<td>0.1653</td>
</tr>
<tr>
<td>Body temp &gt; 38.0°C</td>
<td>2.1119</td>
<td>0.8883</td>
<td>5.6524</td>
<td>0.0174</td>
<td>0.1385</td>
</tr>
<tr>
<td>Immunomodulation</td>
<td>1.9623</td>
<td>0.9473</td>
<td>4.2911</td>
<td>0.0383</td>
<td>0.1097</td>
</tr>
<tr>
<td>Time of onset &lt;72h</td>
<td>1.6565</td>
<td>0.7649</td>
<td>6.4897</td>
<td>0.0063</td>
<td>0.1189</td>
</tr>
</tbody>
</table>

Conclusions: Taking into account the high specificity achieved, we accept the authors propose the use of the present score to exclude ASAN in situations in which access to synovial fluid is difficult or technically not feasible.

Disclosure of Interest: None declared


IMMUNOGENICITY AND SAFETY OF 23-VALENT PNEUMOCOCCAL VACCINE IN RA PATIENTS: RESULTS OF A 4-YEAR FOLLOW UP STUDY


Background: Comorbid infections have significant impact on morbidity and mortality, especially in autoimmune diseases. Prevention of infection is an integral part of supervision of these patients.

Objectives: To investigate immunogenicity and safety of 23-valent polysaccharide pneumococcal vaccine in patients with rheumatoid arthritis (RA) treated with diseases modifying anti rheumatic drugs (DMARDs) and biologic diseases modifying anti rheumatic drugs (bDMARDs).

Methods: The study included 110 patients (females – 81 (73.6%), males – 29 (26.4%), aged 23–76 y), 79 RA pts and 31 controls with ≥2 recent episodes of upper respiratory tract infections (bronchitis, pneumonia). 52 RA pts were treated with methotrexate (MT), 14 – with leflunomide (Lef), 13 – with TNF-α inhibitors +MT. One dose (0.5 ml) of 23-valent polysaccharide pneumococcal vaccine was administered subcutaneously without discontinuing MT/Lef or 28–30 days prior to initiation of TNF-α inhibitors. Control visits were scheduled as follows: at baseline (Visit I), and in 1, 1.3, 3 and 12 months after vaccination. 39 out of 110 pts were followed for 24 months, 23 pts – for 36 months, and 16 pts – for 48 months. Standard clinical examination and lab tests were performed at each visit. Levels of serum antibodies (AB) to Pneumococcal capsular polysaccharides were measured with Vacc2ymeTM PCP IgG 2 panels (The Binding Site Group Ltd, Birmingham, UK). Coefficient of post-immunisation response (CPR) was determined for each patient, as the ratio of AB levels at Visits II, III, IV, V, VI and VII to AB level at Visit I.

Results: There were no documented clinical or radiological symptoms of bacterial pneumonia in a single patient during the FUP. CPR dynamics in RA pts on different therapeutic regimens and in the controls is shown in the table 1.

Abstract SAT0394 – Table 1. CPR dynamics in RA pts and the controls during 1-year FUP, Mdx.

<table>
<thead>
<tr>
<th>RA</th>
<th>Visit II (1 month)</th>
<th>Visit IV (12 month)</th>
<th>Visit V (24 month)</th>
<th>Visit VI (36 month)</th>
<th>Visit VII (48 month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.33*</td>
<td>2.64*</td>
<td>2.08*</td>
<td>1.63*</td>
<td>1.56</td>
<td>1.61</td>
</tr>
</tbody>
</table>

For the entire FUP there were no cases of influenza or influenza-like illness registered.

SAT0395

ASSESSMENT OF EFICACY AND SAFETY OF A TRIVALENT SPLIT-VIRUS INFLUENZA VACCINE IN 12 PATIENTS WITH RHEUMATIC DISEASES


Background: In current rheumatology practice concurrent infections produce significant negative impact on patients’ morbidity, mortality and quality of life, especially in cases of systemic connective tissue diseases. Based on WHO estimations the annual incidence of influenza in adult population amounts to 5%–10% worldwide. Influenza can lead to hospitalisation (3 to 5 million cases per year) and even death (250–500 thousand cases per year). Flu and its complications rates are higher in patients with rheumatic diseases (RD) as compared to general population. Therefore, prevention of influenza should be viewed as integral part of RD population management.

Objectives: To study the safety and efficacy of inactivated split-virus influenza vaccine in patients with rheumatoid arthritis (RA), ankylosing spondylitis (AS), and systemic scleroderma (SS) treated with diseases modifying anti rheumatic drugs (DMARDs) and biologic diseases modifying anti rheumatic drugs (bDMARDs).

Methods: 133 subjects (97 females and 36 males, aged 22–85 y) with recent acute respiratory viral infections (ARVI) and flu episodes in medical records were enrolled, including 52 RA patients, 34 AS patients, 7 SS patients and 40 healthy volunteers as the control group. 39 RA pts received methotrexate (MTX), 12 – TNFs inhibitors+MTX, 8 – leflunomide, 2 – abatacept, 2 – sulfasalazine, 1 – tocilizumab +MTX. 19 AS patients were treated with nonsteroidal anti-inflammatory drugs (NSAIDs), 15 – with TNF inhibitors. The RD duration ranged from 2 months to 46 years. All participants were injected subcutaneously with one dose (0.5 ml) of the “Vaxigrip” vaccine containing the actual influenza virus strains with ongoing therapy. The control visits were scheduled at baseline, and in 1, 3 and 6 months after vaccination (Visits 0, 1, 2 and 3, respectively). Standard clinical and laboratory tests were performed during each visit.

Results: Vaccine tolerability was good in 103 participants (77.4%). Post-vaccination pain, swelling and redness of the skin up to 2 cm diameter were registered in 20 cases (15%), low-grade fever, myalgia and malaise were documented in 10 cases (7.5%). There was no causal relationship between these reactions and principal therapy, therefore, no modifications of therapeutic regimens were required, and complete resolution occurred within 24 hours without additional interventions. No RD exacerbations or emergence of de novo autoimmune disorders were observed during the FUP. At baseline mean pts’ DAS28 and BASDAI scores were 3.56 and 3.85, improving up to 1.99 and 3.09, respectively, 6 mo post-vaccination. For the entire FUP there were no cases of influenza or influenza-like illness registered.

Disclosure of Interest: None declared

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