Are the Autoimmune/Inflammatory Syndrome Induced by Adjuvants (ASIA) and the Undifferentiated Connective Tissue Disease (UCTD) related to each other? A Case-Control Study of Related exposures.


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ABSTRACT

The Autoimmune/Inflammatory Syndrome Induced by adjuvants (ASIA) is an entity that includes different autoimmune/inflammatory manifestations observed after exposure to an adjuvant. Patients with Undifferentiated Connective Tissue Disease (UCTD) present many signs and symptoms of “ASIA”, including the idea that an exposure to adjuvants can be a trigger for UCTD. The aim of this control-case study is to investigate prior exposures to adjuvants in 92 patients affected with UCTD and 92 age and sex-matched controls with no family history of autoimmunity. Methods: An ad hoc created questionnaire that tests exposure to the possible triggers of “ASIA”, such as vaccinations (HBV vaccine, HPV vaccine, tetanus vaccine), dental treatment, silicone implants, rhinoplasty, Influenza vaccine, MRSA vaccine, Penicillin, penicillamine, acupuncture, iron, mercury, lead, chromium, steel, molybdenum, nickel, cobalt, copper, silver, zinc, copper, lead, aluminum, tin, bismuth, tin, and cadmium. For both groups autoantibodies were analyzed (i.e. antinuclear, anti-ENA, anti-dsDNA, anti-cardiolipin, anti-β2-glycoprotein I). Continuous variables were reported as mean and standard deviation, while percentages were reported for categorical variables. T-test was calculated for continuous variables while Chi square or Student's t Test was used for categorical variables. All statistical tests were two-sided and only a p value < 0.05 was considered statistically significant.

RESULTS 3: Exposure to ASIA triggers

<table>
<thead>
<tr>
<th>UCTDs</th>
<th>ASIA +</th>
<th>ASIA -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controls</td>
<td>79</td>
<td>13</td>
</tr>
<tr>
<td>64/67 (96%)</td>
<td>41/49 (84%)</td>
<td></td>
</tr>
<tr>
<td>11/33 (33%)</td>
<td>3/33 (10%)</td>
<td></td>
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<tr>
<td>p &lt; 0.001</td>
<td>p = 0.011</td>
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</tbody>
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CONCLUSIONS

Our patients with UCTD resulted more exposed than controls to:
1) Metal Implants
2) Vaccination anti-tetanus toxoid* and anti-HBV*
3) Metal factories and foundries (<1km) Smoking.

Nearly half of the patients (57%) have been exposed to the major ASIA triggers and they can be considered part of the ASIA spectrum.

The fact that the exposed UCTDs presented more symptoms typically associated with ASIA supports our conclusion.

As the patients exposed to major ASIA triggers presented more frequently with familiarity for autoimmunity, we suggest that adjuvants are one of the "mosaic of autoimmunity", playing as an environmental trigger on a predisposing genetic background.

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MALAYU et al. (1995)