Risk factors for persistence and tolerance of Cow’s milk allergy

J.M. GIRALDEZ MONTERO¹, G. DURAN PIÑEIRO¹, I. VARELA REY¹, R. LEIS TRABAZO², I. ZARRA FERRO¹. ¹University Clinical Hospital of Santiago de Compostela. Pharmacy Department, Santiago de Compostela, Spain ²University Clinical Hospital of Santiago de Compostela. Pediatric Department, Santiago de Compostela, Spain

Abstract number: 4CP-005. Email: jose.maria.giraldez.montero@ Sergas.es

Background and importance

Cow’s milk proteins allergy (CMPA) is the universally most common food allergy in the first years of life, and the incidence has increased over the last few years. The presence of CMA has important repercussions on patients and their families as it diminishes their quality of life.

Aim and objectives

Our aims were to characterize our population of children with CMPA and to identify predictive factors for the persistence of this allergy.

Material and Methods

- Retrospective observational study in 168 children diagnosed with CMPA at the gastroenterology and Nutrition Unit undergoing treatment with special formulas for the management of CMPA between 1 January and 31 March 2017 in the University Clinical Hospital of Santiago de Compostela.

- Clinical variables and complementary tests, perinatal and nutritional factors, symptoms and the type of hydrolysed formula used was recorded. Children were followed up to 2 years of age.

- A logistic regression analysis was used to investigate independent predictive factors for the persistence of CMPA beyond the age of 1.

Results

88 males (52.4%) with a mean age at diagnosis of CMPA of 3.27 ± 2.82 months, 31% did not have a differentiated diagnosis. 89.3% were born after 37 weeks’ gestation, 20.2% by caesarean section. 46.4% were breastfed, 36.1% artificial and 17.5% mixed. 47.1% had a first or second degree family history.

In 25 patients (14.9%) the CMPA was IgE-mediated, of which only 24% resolved their intolerance before one year. The mean age of resolution was 18.77 ± 6.25 months.

- Table: Tolerance of CMPA

<table>
<thead>
<tr>
<th>Age of diagnosis (months)</th>
<th>Tolerance of CMPA at 12 months</th>
<th>Tolerance of CMPA at 12 months</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3</td>
<td>23 (26.1%)</td>
<td>65 (73.9%)</td>
<td>0.475</td>
</tr>
<tr>
<td>3-6</td>
<td>14 (27.3%)</td>
<td>37 (72.3%)</td>
<td>0.834</td>
</tr>
<tr>
<td>6-12</td>
<td>2 (15.4%)</td>
<td>12 (84.6%)</td>
<td>0.766</td>
</tr>
<tr>
<td>12-24</td>
<td>2 (25.0%)</td>
<td>3 (75.0%)</td>
<td>0.363</td>
</tr>
</tbody>
</table>

- Figure 1: Kaplan-Meier curve for the persistence of CMPA by symptom type

The most commonly used substitution formulas in our study were hydrolyzed lactose-free milk protein formulas.

Conclusion

- The presence of IgE-mediated CMPA, gastrointestinal and/or skin symptoms have negative effects on tolerance.
- No perinatal or nutritional risk factors were found to predict the persistence of CMPA.

Patients who began with gastrointestinal and/or skin symptoms were observed to take longer to acquire tolerance than those with subjective symptoms at the beginning of the picture, p = 0.018.

Patients with IgE-mediated CMPA had more skin symptoms (84%) than those not mediated by IgE.