Avoiding Small Intestinal Biopsies for Diagnosis of Celiac Disease in Children: A Reliable Strategy for All Patients?

Por: Araya, M (Araya, Magdalena)\textsuperscript{1}; Diaz, J (Diaz, Julia)\textsuperscript{2}; Oyarzun, A (Oyarzun, Amaya)\textsuperscript{1}; Lucero, Y (Lucero, Yalda)\textsuperscript{3}; Alarcon, T (Alarcon, Teresa)\textsuperscript{4}; Gonzalez, M (Gonzalez, Monica)\textsuperscript{5}; Canales, P (Canales, Paulina)\textsuperscript{6}; Fierro, L (Fierro, Liliana)\textsuperscript{7}; Perez-Bravo, F (Perez-Bravo, Francisco)\textsuperscript{1}

Abstract

Background: Current reports applying ESPGHAN exception criteria (EEC) to diagnose celiac disease (CD) without duodenal biopsies indicate that a high percentage of patients with CD may be identified when applied correctly in specialized settings. Application of the EEC, however, in "daily life conditions" at the different levels of medical services is not clear.

Methods: EEC was applied to 130 pediatric patients evaluated for CD at 5 public hospitals in Santiago, Chile, during 2010 to 2015. Clinical presentation, serum anti-tissue transglutaminase 2 and anti-endomysium antibodies (EMA), genotyping, and small intestinal histology were obtained from clinical charts.

Results: A total of 78 of 130 patients reviewed had some of the data required for analysis, but EMA was determined in 54% and genotyping in 2.3% of patients, limiting the study. After offering free genotyping, only 12 of 78 (15%) had all data required for EEC application. In this small group, 10 of 12 (83.3%) patients could avoid duodenal biopsies and 2 (16.7%) with potential CD were misdiagnosed. Main reasons for not doing EMA and genotyping were that they are expensive, unavailable in the local health care center, and considered "not necessary" for diagnosis.

Conclusion: Limited resources in clinical settings reduce availability of EMA and genotyping, making application of EEC criteria difficult and only possible only in 15% of our patients. Within this subgroup, biopsies could be avoided in 83.3%, and 16.7% of patients with potential CD were misdiagnosed. Insufficient studies and incorrect interpretation of EEC contributed to...
incomplete assessment in 52 of 130 (40%) patients. The Chilean public health system is likely representative of several others present in developing and developed countries.

**Palabras clave**

**Palabras clave de autor:** celiac disease; diagnosis; duodenal biopsy; ESPGHAN

**KeyWords Plus:** ESPGHAN 2012 GUIDELINES; FOLLOW-UP; POPULATION; CRITERIA; COHORT; ADULTS

**Información del autor**

**Dirección para petición de copias:** Araya, M (autor para petición de copias)

+ Univ Chile, Inst Nutr & Food Technol, Santiago, RM, Chile.

**Direcciones:**

+ [ 1 ] Univ Chile, Inst Nutr & Food Technol INTA, Santiago, Chile
+ [ 2 ] Univ Chile, Pediat Gastroenterol & Nutr Program, Fac Med, Santiago, Chile
+ [ 4 ] Univ Chile, Hosp San Juan de Dios, Santiago, Chile
+ [ 5 ] Univ Chile, Hosp Roberto del Rio, Santiago, Chile
+ [ 7 ] Hosp Van Buren, Valparaiso, Chile
+ [ 8 ] Univ Chile, Fac Med, Nutr Dept, Santiago, Chile

**Direcciones de correo electrónico:** maraya@inta.uchile.cl

**Financiación**

<table>
<thead>
<tr>
<th>Entidad financiadora</th>
<th>Número de concesión</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTA, University of Chile</td>
<td></td>
</tr>
<tr>
<td>Fondecyt Iniciacion</td>
<td>11121671</td>
</tr>
</tbody>
</table>

Ver texto de financiación

**Editorial**

LIPPINCOTT WILLIAMS & WILKINS, TWO COMMERCE SQ, 2001 MARKET ST, PHILADELPHIA, PA 19103 USA

**Información de la revista**

• Impact Factor: Journal Citation Reports

**Categorías / Clasificación**
Áreas de investigación: Gastroenterology & Hepatology; Nutrition & Dietetics; Pediatrics

Categorías de Web of Science: Gastroenterology & Hepatology; Nutrition & Dietetics; Pediatrics

Información del documento

Idioma: English
Número de acceso: WOS:000431516400022
ID de PubMed: 29135820
ISSN: 0277-2116
eISSN: 1536-4801