



ORIGINAL ARTICLE

Association between follicular gastritis and *Helicobacter pylori* in children seen at a public hospital in Peru[☆]



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Received 2 August 2015; accepted 27 January 2016

Available online 27 April 2016

KEYWORDS

Helicobacter pylori;
Children;
Gastritis;
Peru (source: DeCS
BIREME)

Abstract

Background: For the last 15 years, infection from *Helicobacter pylori* (*H. pylori*) has been recognized in gastritis pathogenesis, and is known to trigger an important inflammatory response in these patients.

Aim: To determine the association between follicular gastritis and *H. pylori* infection in children seen at a public hospital in Peru.

Methodology: An analytic, cross-sectional study was conducted on all the children treated at the *Hospital Nacional Docente Madre "Niño San Bartolomé"* in Lima, Peru, within the time frame of 2011-2012. All the personal data from the patients' medical histories and endoscopic procedures were collected. The crude prevalence ratios (PR) were obtained and adjusted (aPR) with their 95% confidence intervals (95%CI), using generalized linear models with the binomial family and log link function.

Results: A total of 123 children met the study criteria. Forty-eight (39%) of the study sample were girls and the mean age of the children was 12 years. *H. pylori* was present in 44% of the sample and 9% presented with more than 100 bacteria per field (classified as +++) . Thirty-five percent of the children had esophagitis due to concomitant reflux. The presence of *H. pylori* was associated with follicular gastritis ($P < 0.01$; aPR: 2.3; 95% CI:1.49-3.49), adjusted by the children's age.

[☆] Please cite this article as: Mejia CR, Vera CA, Huiza-Espinoza L. Asociación entre gastritis folicular y *Helicobacter pylori* en niños atendidos en un hospital público peruano. Revista de Gastroenterología de México. 2016;82:80-85.

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Conclusions: Based on the data analyzed, it was concluded that the children with follicular gastritis had a greater likelihood of having *H. pylori* than those that did not present with gastritis. These results can be extrapolated to other similar populations and should be evaluated in each setting so that this does not become a public health problem within the next few years.

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PALABRAS CLAVE

Helicobacter pylori;
Niños;
Gastritis;
Perú (fuente: DeCS
BIREME)

Asociación entre gastritis folicular y *Helicobacter pylori* en niños atendidos en un hospital público peruano

Resumen

Antecedentes: Durante los últimos 15 años la infección por *Helicobacter pylori* (Hp) ha sido reconocida en la patogénesis de la gastritis, desencadenando una importante respuesta inflamatoria.

Objetivo: Determinar la asociación entre gastritis folicular y la infección de Hp en niños atendidos en un hospital público peruano.

Metodología: Estudio transversal analítico desarrollado entre los años 2011 y 2012, con la totalidad de los niños atendidos en Hospital Nacional Docente Madre «Niño San Bartolomé», de Lima, Perú. Se recolectaron los datos personales de su historia clínica, datos del procedimiento endoscópico y sus hallazgos. Se obtuvieron las razones de prevalencia crudas y ajustadas (RPa) con sus intervalos de confianza del 95% (IC del 95%), usando los modelos lineales generalizados, con la familia binomial y la función de enlace log.

Resultados: Participaron 123 niños que cumplían con los criterios del estudio, 48 (39%) fueron niñas y la mediana de edad fue 12 años. Presentó Hp el 44% de ellos y el 9% presentó más de 100 bacterias por campo (clasificados como 3 cruces). El 35% tuvo esofagitis por reflujo concomitante. La presencia de Hp estuvo asociada a la gastritis folicular ($p < 0.01$; RPa: 2.3; IC del 95%, 1.49-3.49), ajustando por la edad de los niños.

Conclusiones: Sobre la base de los datos analizados se concluye que los niños con gastritis folicular tienen más probabilidad de tener Hp con respecto a los que no presentan gastritis. Los resultados pueden ser extrapolados a otras poblaciones similares, debiendo ser evaluado cada escenario para que esto no se convierta en un problema de salud pública en unos años.

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Introduction

Helicobacter pylori (*H. pylori*) is a spiral Gram-negative microorganism that has been reported worldwide. Approximately one out of every 2 persons of the world population is infected with *H. pylori*.¹⁻⁴ For the last 15 years, *H. pylori* infection has been recognized in the pathogenesis of gastritis and peptic ulcer disease by triggering an important inflammatory response.^{5,6} The infection is acquired mainly in childhood and is associated with different gastrointestinal symptomatology, including recurrent abdominal pain, chronic hemorrhagic gastritis, and follicular gastritis, and it is sometimes asymptomatic.⁷⁻⁹ Recent studies suggest that chronic follicular gastritis in childhood can increase the risk for developing gastric neoplasia in adult life.¹⁰ In our environment, different studies have been conducted on the histopathologic characteristics of gastritis from *H. pylori*,¹¹ but whether there is a relation between that infection and its main characteristics, or if that relation exists in the pediatric population, has not been precisely determined.

Therefore, the aim of our work was to determine whether there was an association between follicular gastritis and *H. pylori* in children seen at a public hospital in the metropolitan area of Lima, Peru.

Methods

Study design and population

Evaluating the anatomopathologic registers of the *Hospital Nacional Docente Madre Niño San Bartolomé* of all the children that underwent esophagogastroduodenoscopy requiring gastric biopsy or biopsy of some section of the gastrointestinal tract between the years 2011 and 2012, an analytic cross-sectional study was conducted on those patients that had the possibility of being affected by *H. pylori*. The patients seen at a different hospital, those that did not have a gastric biopsy, or those whose medical records were incomplete, were excluded from the study (23 patients).

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