

PREGUNTA 35

¿Cuál de los siguientes rasgos morfológicos no esperamos encontrar en la biopsia del cuerpo gástrico de un paciente con deficiencia de vitamina B12?

1. *Helicobacter pylori*.
2. Metaplasia intestinal.
3. Hiperplasia de células endocrinas.
4. Atrofia.

Bibliografía:

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Original Article

Helicobacter pylori, a causative agent of vitamin B₁₂ deficiency

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Abstract

Background: *Helicobacter pylori* is one of the most common causes of peptic ulcer disease worldwide and a major cause of chronic superficial gastritis leading to atrophy of gastric glands.

Methodology: A total of 60 patients suffering from gastric disease due to *H. pylori* infection were evaluated. Endoscopy was performed and gastric biopsies were obtained for histopathology and urease test. Blood was simultaneously collected for the determination of the levels of vitamin B12 and the MCV. Vitamin B12 levels were determined by chemiluminescent assay.

Results: Our results indicate that the mean vitamin B12 level \pm SEM for the total population, the *H. pylori* infected and non-infected patients were 264.5 \pm 22.9, 207.7 \pm 21.9 and 419.7 \pm 39.8 respectively. *H. pylori* was found in 71.7% (43/60) of the patients tested. The level of vitamin B12 was lower than 200pg/ml (deficient) in 67.4% (29/43) of patients tested positive for *H. pylori*.

Conclusion: *H. pylori* appears to be implicated in causing vitamin B12 deficiency.

Key Words: *Helicobacter pylori*, Vitamin B12, Gastritis, Urease, MCV

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Introduction

Helicobacter pylori is a fastidious gram negative microorganism with a spiral/helical shape and 5 to 7 sheathed uni-polar flagella. It requires high humidity, a microaerophilic environment, and an incubation temperature of 37°C for growth. Although *H. pylori* colonies may appear after 3 to 5 days, the primary growth may take up to 7 days to appear and the colony morphology is described as translucent, small pinpoint

associated with an increased risk of B-cell lymphoma of gastric mucosa-associated-lymphoid-tissue (MALT – lymphoma) [7,8].

Vitamin B₁₂, which is a water soluble vitamin, is a complex molecule that cannot be synthesized in the human body and must be supplied in a diet containing meat and dairy products. Upon digestion, B12 is released from food and complexes with gastric intrinsic factor (IF). The B₁₂-IF complex binds to specific