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H. pylori Colonization of the Adenotonsillar Tissue: Fact or Fiction?

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Gastric infection with *Helicobacter pylori* is the most common chronic infection worldwide. One of the routes of transmission of the infection is the oral route. Molecular techniques have allowed the detection of *H. pylori* DNA in samples of the oral cavity, although culture of *H. pylori* from these types of samples has been sporadic. Studies have tried to demonstrate the presence of *H. pylori* in adenotonsillar tissue, with contradictory results. Our aim was to clarify whether the adenotonsillar tissue may constitute an extragastric reservoir for *H. pylori*.

Sixty-two patients proposed for adenoidectomy or tonsillectomy were enrolled. A total of 101 samples, 55 adenoid and 46 tonsils, were obtained. Patients were characterized for the presence of anti-*H. pylori* antibodies by serology. On each surgical sample rapid urease test, immunohistochemistry, PCR-DEIA directed to the *vacA* gene of *H. pylori*, and FISH with a peptide nucleic acid probe for *H. pylori* were performed.

In the study population, 33% of the individuals had anti-*H. pylori* antibodies. Rapid urease test was positive on samples of three patients, all with positive serology. Immunohistochemistry was positive on two patients, all with negative serology. All positive cases by rapid urease test or immunohistochemistry were negative by FISH. PCR-DEIA directly in adenotonsillar tissue was negative in all samples.

In conclusion, the adenotonsillar tissue does not constitute an extragastric permanent reservoir for *H. pylori* infection, at least in this population from the North of Portugal.