Short Communication

Prevalence of Helicobacter pylori in Egypt: An over estimation or an iceberg?

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Helicobacter pylori (H. pylori) is a prevalent infection that annoy both infected individuals and treating physicians. It can be detected in most of patients with upper gastrointestinal symptoms in areas of high prevalence (1).

To manage *H. pylori* appropriately, we need to know its actual prevalence, accuracy of diagnostic strategies, efficacy of treatments available and patterns of resistance to used antibiotics (2). In Egypt, the actual prevalence is not known due to lack of properly designed epidemiological studies about *H. pylori.* Several sporadic trials were published about *H. pylori* prevalence in specific populations (Table 1).

The prevalence of *H. pylori* in Egypt ranges from (13% - 90.9%) depending on the studied population and the year of publication. The prevalence in pediatric population ranges from 13%-72% and in adults from 26.2-90.9%. Average prevalence in pediatric population is about 44.4 % while average prevalence in adult population is about 67% and average prevalence in the whole population is about 62.5% . Table 1 and table 2 show reported data about *H. pylori* prevalence in different age groups and different clinical presentations.

It is crucial to keep in mind the precautions needed before testing for *H. pylori* as most diagnostics depend on bacterial viability (except serological test) and patients have to stop antibiotics at least 4 weeks before doing the test and they have also to stop acid suppressants like proton pump inhibitors (or potassium competitive acid blockers) one-two weeks before doing the test.

Due to this marked variability in reported prevalence and the heterogeneity of the studied population; it is of great importance to have a well-designed epidemiological study to accurately estimate the average prevalence of *H. pylori* in Egypt. This study should consider both symptomatic and asymptomatic population, different geographic regions, gender, and age groups. Based on the results of such well-designed prevalence study the actual prevalence could be estimated and further actions like disease burden, required diagnostics, complication rates, treatment costs, screening and prevention could be initiated on a solid base.

Table 1: Prevalence of *Helicobacter pylori* in adult population in Egypt

Clinical Context	Diagnostic test	Prevalence	Reference/ year
Chronic HCV	Stool antigen	88.3%	Hanafy et al. 2016 (3)
Dyspepsia	polymerase chain reaction/restricted fragment length on gastric biopsies	70%	Ghaith et al. 2016 (4)
GI Symptoms	Stool antigen	69.4%	Sabah et al. 2015 (5)
Pregnant women with pre eclampsia	Serology	54.4%	Mosbah & Nabil; 2015 (6)
Relatives of infected children	Serology	69.1%	Hamed et al. 2013 (7)
T1DM Healthy controls	Serology Serology	79% 51.2%	El-Eshmawy MM et al. 2012 (8)
HCV Healthy controls	Rapid urease testing Rapid urease testing	55.6% 39.4%	El-Masry et al. 2010 (9)
Perforated DU	Rapid urease testing/histology/culture	84.8%	El-Nakeeb et al. 2009 (10)
DM Healthy controls	Serology Serology	85% 76.7%	Hamed et al. 2008 (11)
Coronary artery disease Healthy controls	Serology Serology	61.2% 26.2%	Badran & Mahfouz. 2006 (12)
Recurrent aphthous ulcerations	H. Pylori PCR	67%	Elsheikh & Mahfouz. 2005 (13)
Primary Sjogren's S Secondary Sjogren's S CT disorders Healthy controls	Serology Serology Serology Serology	80.6% 71% 60.9% 56.3%	El Miedany et al. 2005 (14)
Gastric cancer	Histology	57.6%	El-Shahat 2005 (15)
Dyspepsia /liver cirrhosis	Histology	65.75%	Elshal et al. 2004 (16)
Chronic liver disease & dyspepsia	Serology PCR	82.2 53.3%	Abdel Mageed et al. 2004 (17)
Cholecystectomy	Histology	69.6%	Gad Elhak et al. 2004 (18)
Dyspeptic patient	Rapid urease test Histology	58% 52%	El-Nasr et al. 2003 (19)
Pregnant women	Serology	88%	Bassily et al. 1999 (20)
Chronic liver disease	Culture Rapid urease test	40.45% 67.3%	Omar et al. 1997 (21)
Asymptomatic young adults	Serology	87.6%	Salem et al. 1993 (22)
Medical personnel Healthy controls	Serology	86% 90.9%	Salem et al. 1993 (23)

Table 2: Prevalence of *Helicobacter pylori* in pediatric population in Egypt

Clinical Context	Diagnostic test	Prevalence	Reference/ year
Infants and children with PHG	Histology	60%	Eskander et al. 2018 (24)
Recurrent abdominal pain	Serology	43.3%	Badr et al. 2012 (25)
Iron deficiency anemia	Serology and UBT	48%	Fayed et al. 2008 (26)
Schoolchildren	UBT	72.38%	Mohammad et al. 2008 (27)
NHL	serology	43.2%	**El-Mahallawy et al. 2004 (28)**
Children attending out patient department	Serology	50.5%	**Omar et al. 2001 (29)**
Newborns	Serology	13% (7-9 months) & 25% (18 months)	**Bassily et al. 1999 (20)**

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