

ASSOCIATION OF REGULAR ARRANGEMENT OF COLLECTING VENULES PATTERN OF GASTRIC MUCOSA,
HISTOPATHOLOGY AND RAPID UREASE TEST IN DIAGNOSING HELICOBACTER PYLORI GASTRITIS:
A STUDY IN A SINGLE TERTIARY HOSPITAL

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Significance: To determine if absence of RAC is an indicator of *Helicobacter pylori* infection among patients who underwent esophagogastroduodenoscopy.

Methodology: This was a prospective cross-sectional study of adult patients who underwent diagnostic workup for *H.pylori* gastritis.

Results: Twenty-eight patients were included. Mean age was 49.68 ± 15.75 years and 68% were females. Twenty-two were found to have RAC-positive while 6 were RAC-negative. Epigastric pain (77%) is the most common clinical presentation of RAC-positive patients. Major endoscopic findings include erosive gastritis (71%), esophagitis (50%); and hiatal hernia (46%). In determining presence of *H.pylori*, 95% were negative in histopathology and 78% were negative in rapid urease test. The presence of RAC has 87.5% sensitivity, 75% specificity, and 85.7% accuracy in determining a normal gastric mucosa. Presence of RAC was 3.5 times as likely to correlate with normal *H.pylori*-negative gastric mucosa as compared to *H.pylori*-positive. Absence of RAC (aRAC) was 83% less likely to be seen in *H.pylori*-negative gastric mucosa. A 95.5% probability that the gastric mucosa is normal or without *H.pylori* when RAC is present while 50% probability that the patient is *H.pylori*-positive when RAC is absent. The absence of RAC has approximately 75% sensitivity and 87.5% specificity to detect a *H.pylori*-positive gastric mucosa; with 85.71% accuracy. All patients who were RAC-negative had positive rapid urease test results while patients who were RUT negative had RAC-positive gastric mucosa.

Conclusion: The absence of regular arrangement of collecting venules (RAC) in the gastric mucosa using standard endoscopy can predict a *Helicobacter pylori* infection. RAC can be used as a good alternative to rapid urease test and histology in the diagnosis of *H. pylori* gastritis.

Keywords: cross-sectional, RAC, *Helicobacter pylori*, rapid urease test