

The role of gastric acidity and lower esophageal sphincter tone on esophagitis among dyspeptic patients

Lelosutan, Syafruddin AR, author

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Abstrak

Background: Esophagitis implies an organic damage of the esophagus due to several pathophysiologic factors, predominantly: (1) degree of gastric acid secretion (gastric pH), whereabouts are rapidly or slowly to be mucosal breaks onto esophagus were under the influence by: (a) gastric pH ≤ 4 and (b) the contact of gastric acid into esophageal mucosal. (2) Lower esophageal sphincter (LES) as an important factor for antireflux mechanisms, which antireflux mechanism cannot serve as a barrier system whenever tone of LES comes down until ≤ 10 mmHg that causes feeble resting LES pressure. Esophageal injuries are recognized endoscopically by the presence of the Savary-Millers classification (1985), but there are not definitely which ones principally to pathophysiologic factor.

Methods: This was a consecutive non-random sampling cross sectional study Thirty subject from 127 patients with dyspepsia undergoing elective upper-endoscopic examination with collecting of the gastric juice and biopsies of lower esophageal mucosal, also esophageal manometric examination. Before that, clinical inclusive and exclusive criterias until laboratory examination were performed. Significant interval was 95%. Analyzing data with Fisher's Exact Test One-Tail to correlate between gastric pH and hypotonic LES into esophagitis.

Results: Esophagitis prevalence was 22.8%. Fisher's Exact Test One-Tail to correlate esophagitis with gastric pH ≤ 4 was significant ($p=0.013798$), but with hypotonic LES (tones of LES ≤ 10 mmHg) was not ($p=0.60269$). The combined roles of gastric pH and tones of LES into esophagitis are included: (1) Frequency of roles of pH ≤ 4 and hypotonic LES are 48.2% (2) Frequency of role of pH < 4 without hypotonic of LES are 33.3%. (3) Frequency of role of hypotonic LES without pH ≤ 4 are 11.1% and (4) Frequency of esophagitis without roles of pH ≤ 4 and hypotonic of LES are 7.4%.

Conclusions: The sum of gastric pH ≤ 4 and hypotonic of LES together are more than each separate factor. Onto statistically was significant between esophagitis and gastric pH, but there is no correlation with tones of LES. So, gastric pH plays a more important role than LES.