

Definition of Histopathologic Changes in Gastroesophageal Reflux Disease

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Abstract

A series of 71 patients with multiple measured biopsies of the gastroesophageal junctional region permitting assessment of the presence and length of different glandular epithelial types is presented. All but nine of 53 patients in whom a 24-hour pH study was performed had abnormal reflux, suggesting that endoscopic recognition of an abnormal columnar mucosa at the gastroesophageal junction sufficient to precipitate multiple-level biopsies indicates a high probability of abnormal reflux. All patients had cardiac mucosa (CM) or oxyntocardiac mucosa (OCM). CM was present in 68 of 71 patients. The prevalence of intestinal metaplasia increased with increasing CM+OCM length, and was present in all 22 patients with a CM+OCM length >2 cm and in 20 of 49 patients with a CM+OCM length <2 cm. Patients with a CM+OCM length >2 cm had a markedly higher acid exposure than patients with a CM+OCM length <2 cm. The findings suggest that the presence of CM and OCM in the junctional region are predictive of abnormal acid exposure, and that increasing OCM+CM length correlates strongly with the amount of acid exposure. The histologic finding of CM and OCM represents a sensitive histologic criterion for gastroesophageal reflux rather than normal epithelia. These diagnostic criteria represent the first useful histologic definitions for assessing the presence and severity of reflux.