Endoscopic measurement of Barrett's esophagus length is unreliable - a prospective comparative biopsy study.

Abstract:
BACKGROUND AND AIMS: Endoscopic assessment of the length and area of Barrett's esophagus (BE) has become crucial in assessing its spontaneous course as well as any effect of pharmacological or endoscopic treatment. Little, however, is known about the extent to which the endoscopic assessment of BE length and area correlates with the histopathological confirmation of BE epithelium. PATIENTS AND METHODS: 75 consecutive patients (mean age 60 years; 58 men, 17 women) were included in a prospective study on the basis of the endoscopic suspicion of BE. BE was endoscopically defined as gastric-type epithelium between the proximal cardiac folds and the Z line, on moderate air insufflation. Stepwise four-quadrant biopsies (4QB) were then taken, beginning at the proximal cardiac folds and then every 2 cm up to the Z line. RESULTS: Among the 75 study patients, BE was histologically verified in 57 cases (group 1) and not confirmed in any of the endoscopic biopsy samples in 18 cases (group 2). In group 1, the mean difference between the endoscopic and histological assessment of BE length was +1 cm (range 0 - 5 cm); when determining the BE area histologically from 4QB the mean difference to the endoscopic determination was +36 % (range 0 - 93 %). These differences were independent of the presence and degree of hiatal hernia or the presence of long or short BE.
CONCLUSIONS: In the majority of patients, there is only a moderate correlation between the endoscopic and the histological extent of BE. However, we also found a substantial individual variability in endoscopic-histological correlation; therefore studies on the effects of treatment on BE must consider both the endoscopic and histopathological BE lengths.