
4.24. A prospective pilot trial of ablation of Barrett’s esophagus with low-grade dysplasia using stepwise circumferential and focal ablation (HALO system)

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Background & Study Aims: Yearly surveillance endoscopy is carried out for Barrett’s esophagus with low-grade dysplasia (LGD) so that progression to high-grade dysplasia and adenocarcinoma can be detected at the earliest stage. The aim of the study was to assess the long-term safety and effectiveness of circumferential ablation followed by focal ablation (HALO system) for eliminating Barrett’s esophagus and LGD.

Patients & Methods: Patients with 2 - 6 cm of Barrett’s esophagus with histology demonstrating LGD on their last two sequential endoscopies over the previous 2 years and confirmed by two pathologists were enrolled in this prospective, single-center trial. Circumferential ablation was carried out at baseline and at 4 months (if residual Barrett’s esophagus present). Endoscopy with 4-quadrant biopsies every 1 cm was performed at 1, 3, 6, 12, and 24 months. After 1 year, focal ablation was applied to any visible Barrett’s esophagus or irregularity of the squamocolumnar junction. Patients received lansoprazole 30 mg bid. Complete responses for dysplasia (CR-dysplasia) and intestinal metaplasia (CR-IM) at 2-year follow-up, with complete response defined as “all biopsies negative for dysplasia or intestinal metaplasia” were the main outcomes.

Results: Ten patients (nine men, mean age 66.9 years, range 48 - 79) with confirmed LGD (median 4.4 cm, range 3 - 6) underwent circumferential ablation with focal ablation after 1 year as necessary. At 2 years, CR-dysplasia was 100 % and CR-IM was 90 %. There were no strictures or buried intestinal metaplasia at follow-up.

Conclusion: A stepwise regimen of circumferential ablation followed by focal ablation appears to eradicate intestinal metaplasia (90 % CR-IM) and dysplasia (100 % CR-dysplasia) at 2-year follow-up in this trial, without stricture formation or buried intestinal metaplasia.