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BARRETT’S DYSPLASIA AND EARLY CANCER IN WOMEN — RESPONSE TO ENDOSCOPIC ABLATION WITH PHOTODYNAMIC THERAPY

Purpose: Barrett’s high-grade dysplasia (BE+HGD) and early adenocarcinoma (ACA) are generally described as disease of Caucasian men. Relatively little information is available regarding this disease among women and their response to endoscopic ablative therapy.

Methods: Since 1997, 70 patients have undergone photodynamic therapy (PDT) for BE+HGD or ACA. Prior to treatment, all patients were evaluated with computed tomography, endosonography and surgery consultation. All patients either declined, or were considered unfit for surgery. PDT used 2mg/kg porphyrin sodium IV with 630nm red laser light doses of 150–250 J/cm fiber length. No balloon fiber-centering device was used and patients received only a single course of PDT. Residual glandular mucosa remaining after PDT was destroyed using argon beam coagulation. Patient records were reviewed and treatment outcomes compared among male and female patients.

Results: Women comprised 24% of patients in this series (17/70) including 14 BE+HGD patients and 3 ACA patients. Two-sided Wilcoxon rank sum testing found no statistically significant difference between these women and their male counterparts with respect to age (median 69 years), Barrett’s segment length (median 5 cm), effectiveness of complete ablation after PDT only (59%), occurrence of stricture after PDT requiring dilation (20%), recurrence of BE+HGD or ACA after complete ablation (0%) and follow up time (median 23 months).

Conclusions: While BE+HGD and ACA may be found most frequently in men, these are diseases that also affect significant numbers of women. Barrett’s screening and surveillance studies should emphasize the enrollment of adequate numbers of women. This study indicates that women and men with BE+HGD and ACA respond equally well to endoscopic ablation therapy.

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PHOTODYNAMIC THERAPY AND ENDOSCOPIC MUCOSAL RESECTION FOR BARRETT’S DYSPLASIA AND EARLY CANCER
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Purpose: Endoscopic mucosal resection (EMR) and endoscopic ablation with porphyrin sodium photodynamic therapy (PDT) has recently been combined to improve the accuracy of histologic staging and remove superficial carcinomas. We report our experience using these techniques in patients with Barrett’s high-grade dysplasia (BE+HGD).

Methods: All BE+HGD or early cancer patients referred for endoscopic ablation were evaluated with computed tomography and endosonography (EUS). All patients either declined, or were considered unfit for surgery. EUS detected nodular or irregular folds within the segment of glandular mucosa in 3 BE+HGD patients. EMR using the ‘band and snare’ technique was performed followed 6 weeks later by endoscopic ablation with PDT with 2mg/kg IV porphyrin sodium and light doses of 175–250 J/cm fiber length (Mayo Clin Proc, Nov 2002).

Results: The only complications of EMR and PDT were transient chest discomfort and painful swallowing.

Pre-EMR diagnosis | Age | Sex | Post-EMR Diagnosis | BE segment length | Post-PDT Follow Up
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BE+HGD | 69 yrs | M | Adenocarcinoma | 3 cm | 46 months
BE+HGD | 69 yrs | M | Adenocarcinoma | 4 cm | 13 months
BE+HGD | 68 yrs | M | Adenocarcinoma | 4 cm | 6 months

Conclusions: 1) The use of EMR in these BE+HGD patients with nodular or irregular mucosa resulted in histologic upstaging to adenocarcinoma and subsequently higher laser light doses for PDT. 2) The use of porphyrin sodium PDT after EMR of superficial adenocarcinoma appears to be safe and effective for the complete elimination of Barrett’s dysplastic glandular mucosa. 3) EMR should be strongly considered for Barrett’s dysplasia patients who are being evaluated for non-surgical management.

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EFFECT OF INTRAESOPHAGEAL PERFUSION OF CHENODEOXYCHOLIC ACID IN PATIENTS WITH NON-EROSSIVE GASTROESOPHAGEAL REFLUX
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Purpose: Many patients with Non-Erosive Gastroesophageal Reflux Disease (NERD) have relatively low esophageal acid exposure and respond sub-optimally to gastric acid suppression. In these patients, other constituents of gastric contents may induce esophageal symptoms. We have previously demonstrated that gastric contents can cause heartburn when gastric pH >4. (Aliment Pharm Ther 2000;14:129–134). The aim of this study was to test esophageal sensitivity to chenodeoxycholic acid, a component of bile, administered as a provocative test.

Methods: Patients with heartburn, absence of erosions, normal esophageal motility, and % time esophageal pH <5% (NERD) were evaluated. Patients underwent a modified Bernstein acid infusion test and esophageal Barostat balloon distention. The Bernstein consisted of esophageal saline infusion (5 min) followed by 0.1N HCl (10 min). Time and volume to 1st sensation/pain were recorded. Barostat balloon distention was performed using a cylindrical high-compliance polyethylene balloon (5.5-cm length, 2.15-cm radius, 80-ml volume) placed 5 cm above the LES. 1st sensation/pain were recorded. Sensitivity to 2 mM chenodeoxycholic acid (cheno) was assessed similar to the Bernstein acid infusion (10 ml/min). 2mM cheno was chosen since it is within the physiological range of bile salts in the stomach. The volume and time to 1st sensation and pain were measured and compared with the same end points during esophageal acid perfusion (Bernstein test). LS means were generated and one-tailed t-tests and regression analyses were performed (P<0.05 level of significance).

Results: 7 patients (2 Males, 5 Females; mean age 39.4 years) were enrolled. Mean esophageal acid exposure was 3.4%. Mean volume of balloon to pain was 28.6 ml (normal is > 50 ml). Time (min) to pain for acid and 2mM cheno were 5.6 and 6.4 min, respectively. Volume to pain for acid and cheno were 44.7 and 64.9 ml, respectively. 3 of the patients were sensitive to saline infusion. Concordance between acid, cheno and Barostat sensitivity was not observed (P>0.05). Overall, patients with NERD were found to have variable responses to mechanical and chemical stimuli.

Conclusions: Esophageal perfusion of 2 mM chenodeoxycholic acid provides and additional test of chemical sensitivity for esophageal sensitivity that may be useful in assessing visceral pain, investigating pathophysiology of NERD, and stratifying patients with NERD.

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RABEPRAZOLE (RAB) PROVIDES GREATER DAY 1 HEARTBURN (HB) RELIEF THAN OMEPRAZOLE (OME) IN PATIENTS WITH ACUTE EROSIVE ESOPHAGITIS (EE) AND MODERATE TO SEVERE SYMPTOMS

Efficacy and safety of RAB compared to OME in patients with acute EE was evaluated in a double-blind, parallel-group, multinational trial. Patients (N=3,275) with active EE were randomized to receive RAB 20 mg BID for 14 days. The proportion of patients achieving HB relief of >30% at 24 hours post-dose (day 1) was compared for both treatments. Patients were also assessed for symptom severity, impact on daily activities and satisfaction with treatment. Results: 3,275 patients (RAB n=1,637, OME n=1,638) were randomized. At day 1, 20 mg BID RAB was significantly more effective than 20 mg BID OME in achieving HB relief of >30% at 24 hours post-dose (72.6% and 60.5%, respectively; P<0.001). This difference was maintained throughout the 14-day treatment period. In clinic-based analyses, RAB was more effective than OME in achieving HB relief of >30% at 24 hours post-dose at day 6 and days 9 through 14 of therapy. RAB was also more effective in achieving remission of EE at day 1 than OME (62.4% vs. 54.6%; P=0.004). When patients were asked to rate their HB relief, RAB was rated significantly better than OME on day 1 (87.0% vs. 80.6%; P<0.001). Patients treated with RAB also had significantly greater reductions in symptom severity and impact on daily activities than patients treated with OME. Furthermore, a greater proportion of patients treated with RAB reported strong satisfaction with treatment than those treated with OME. In conclusion, RAB provided significantly greater HB relief than OME in patients with acute EE at day 1 and throughout the treatment period.