

TRANSPORTATION MEDIA FOR GASTRIC BIOPSIES TO ISOLATE *CAMPYLOBACTER PYLORI*. C. Prakash, M.D., B. Marshall, M.D., L. Barrett, M.D., R. Guerrant, M.D., and R. McCallum, M.D., F.A.C.G. Dept. of Internal Medicine, and Geographic Medicine, University of Virginia Medical Center, Charlottesville, VA 22908.

Campylobacter pylori (CP) colonization of the stomach is present in 30-60% of dyspeptic patients who undergo upper gastrointestinal endoscopy (EGD). CP is usually isolated by culture of a gastric biopsy. Successful isolation of this organism has depended on good sampling and transportation of the biopsy material in an optimal environment. The purpose of our study was to try and identify the best means of transportation of the gastric biopsies to yield positive culture and Gram staining of the organism.

Methods: Biopsies of the antrum were obtained during routine EGDs from 21 consecutive patients who attended our dyspepsia research clinic. These were placed separately in the following transportation media: a) aliquot of three drops of N saline, b) horse blood agar plate (HBAP), and c) HBAP with anaerobic gas (N 80%, O₂ 15%, CO₂ 5%) filled in a polythene bag and tightly sealed. The biopsies were left in the endoscopy room for 30 minutes at room temperature (the time required to finish the procedure). These were then hand carried to the lab by one of the investigators; to be gram stained, plated, and incubated within 10 minutes.

Results:

No.	Successful Culture		Gram Stain Pos:	
	HBAP+Gas	NaCl	HBAP+Gas	NaCl
13	0	0	0	0
4	4	4	3	4
	HBAP Only	NaCl	HBAP Only	NaCl
4	4	4	3	4

Conclusions: NaCl was an excellent medium of transportation of the biopsy material. A waiting period of up to 30 minutes did not effect the yield on gram staining and culture; in fact, NaCl was a better medium especially for gram staining. Our results should facilitate the isolation and identification of CP.

56

CAMPYLOBACTER PYLORI IN DUODENAL ULCER PATIENTS TREATED WITH EITHER OMEPRAZOLE OR RANITIDINE. D. Pambianco, M.D., R. McCallum, M.D., and B. Marshall, M.D., Department of Medicine, University of Virginia Medical Center, Charlottesville, VA 22908

Purpose: *Campylobacter pylori* (CP) infection may be an etiologic agent in the pathogenesis of duodenal ulcer (DU) disease. The natural history of DU is unaffected by H₂ antagonists. The rapid urease test (CLO test) has been shown to be comparable to culture or histology in detecting the presence of CP.

Method: Twelve patients (6 M, 6 F, average age 41 [22-70]) with acute duodenal ulcers were treated in a double-blind fashion with either ranitidine 150 mg PO BID or omeprazole 20 mg PO qd for four weeks and followed thereafter for 6 months or until relapse on no treatment. EGD was performed at 0, 2, 4, 12, 20, and 28 weeks. CLO tests were used to determine mucosal urease enzyme presence from antral biopsies upon exit from the study which was non-healing at 4 weeks, recurrent DU (4-28 weeks) or non-recurrence at 6 months.

Results: Twelve patients were treated of whom 10 (80%) were healed at 4 weeks. The unhealed patients were both CLO+. In the following 6 months, 5 of 10 (50%) of the remaining patients relapsed and all were CLO+. The remaining 5 patients (50%) who were asymptomatic and ulcer free upon completion of the 6 months were also CLO-. Three patients were smokers; two healed in 4 weeks and remained healed for 6 months and were CLO-; one patient had ulcer relapse after healing at 4 weeks and was CLO+ (P<0.01).

Conclusions: 1. Patients who did not heal on H₂ blockers or more potent acid inhibiting drugs are more likely to be CLO+. 2. The absence of CLO may be a good prognostic factor in terms of relapse since CLO- patients are unlikely to relapse after initial healing and may not need maintenance therapy. 3. While inhibition of acid plays a role in the short term management of duodenal ulcer disease, the relapsing tendency of this disease seems to be influenced by *campylobacter pylori* and possibly other factors yet to be determined.

57

GASTROESOPHAGEAL REFLUX IN PATIENTS WITH PERCUTANEOUS ENDOSCOPIC GASTROSTOMY: A PROSPECTIVE STUDY COMPARING BOLUS VERSUS CONTINUOUS INFUSION FEEDING. PATEL PH, MD; Hunter W, MD; Willis M, BS; Thomas E, MD FACG. VA Medical Center, ETSU College of Medicine, Johnson City, TN.

Continuous infusion of formula diet through a percutaneous endoscopic gastrostomy (PEG) is believed to reduce diarrhea and gastroesophageal reflux (GER), thereby reducing the risk of aspiration. Bolus feeding, however, is physiologic, easy to administer and in certain patients allows ambulation. The aim of this study was to compare these two methods with regard to GER. We prospectively studied 10 patients with a mean age of 74 years (61-93). They were studied over 2 days during which time they underwent continuous esophageal pH monitoring. Esophageal manometry was initially done to locate the lower esophageal sphincter (LES). The pH probe was then placed 5cm proximal to the LES. In random manner, on day 1, half of the patients were fed with 4 boluses consisting of 480cc of Ensure. The remaining patients were given Ensure by continuous infusion at 80cc per hour. All routine precautions were taken. On day 2, the feeding procedure was reversed; thus, all patients were their own controls. Statistical analysis was done using the student's t-test. One patient was excluded from analysis because the pH probe was inadvertently removed during study.

RESULTS:

pH Monitoring GER	BOLUS METHOD		CONTINUOUS METHOD		T-Test
	Mean	Range	Mean	Range	
# of Episodes					
>5 min.	0.9	0-3	1.6	0-8	*
Total # of Episodes	19	1-65	36	1-152	*
% Time in 24 hours	1.8	0-7	3.0	0-13	*

*Not statistically significant.

CONCLUSION: Our study failed to show a significant difference in GER between continuous and bolus feeding through a PEG.

58

MANAGEMENT OF BLEEDING ESOPHAGEAL VARICES: COST EFFECTIVENESS. Joseph M. Payne, M.D., Donald L. Akers, M.D., and Morris D. Kerstein, M.D., Tulane University School of Medicine, New Orleans, LA.

Cirrhosis of the liver as a consequence of alcoholism is the third leading cause of death in the 25- to 65-years age group in major cities. Esophageal varices occurring in nearly 50% of these patients require enormous hospital support including Intensive Care Unit, blood, operating room time, and laboratory services. Child's Class C patients have an initial hospital mortality rate of greater than 80%. Is there a point at which it is financially appropriate to withdraw medical support from patients with this terminal disease, in which even the relatively rare survivors of initial bleeding episodes present a recidivist rate of 90% plus? The physician making this difficult medicolegal, financial, and ethical decision must bear in mind that he treats only the dramatic manifestations of the disease (bleeding encephalopathy) rather than the disease itself (cirrhosis, alcoholism).

Twenty-three Child's Class C patients, all male, with an average age of 51 (41 to 58) years admitted to the charity hospitals of Louisiana required more than 15 units of blood, Pitressin, and Sengstaken-Blakemore tubes. The cost/benefit analysis is calculated as cost of hospitalization divided by months of survival. All required 31 ± 5 days in the hospital; mortality rate was 100%; and cost of treatment was \$62,400 ± \$2,500. Only two patients had Social Security disability insurance; the remainder of the cost was borne by the State.

Variceal bleeding as a consequence of cirrhosis staged as Child's Class C is not subject to cost-effective operative intervention. Extended medical management may also not be cost effective, and in these 23 fatal cases served only to prolong suffering of the patients and their family. Less-aggressive therapy is indicated for a disease with a 100% mortality rate in 60 days.