

COVERING THE COVER

The advantage of polyethylene glycol electrolyte solution combined with lactulose in patients with long interval preparation-to-colonoscopy

Colonoscopy is widely accepted as gold standard modality for colorectal cancer screening and many other large intestinal problems, but it requires bowel preparation that can be challenging for patients. However, inadequate bowel preparation appears in approximately one third of colonoscopies, and causes increased health care costs and morbidity due to repeated preparations and colonoscopic interventions. The quality of colon cleansing decreases with the prolongation of time between end of preparation and initiation of colonoscopy.

In the present article, the authors aimed to investigate whether adding lactulose to PGE has any impact on quality of bowel preparation in patients with long interval preparation-to-colonoscopy (P-C). The study was designed in a prospective, randomised, endoscopist blinded and placebo controlled fashion. 360 patients were enrolled and randomly assigned to PGE+lactulose and PGE+placebo groups in 1/1 fashion. Bowel preparation quality was assessed using Boston Bowel Preparation Scale (BBPS, a score ≥ 6 satisfactory) and Bubble Scale (from 0= no bubbles to 3=bubbles obscuring vision).

General characteristics of two groups were similar in terms of sex, age, time interval for P-C, cecal intubation time and adverse events. PGE+ lactulose group demonstrated higher performance in the bowel cleansing with regard to having higher satisfactory BBPS score (91.1% vs 79.4%, $p < 0.05$) and lower Bubble score (1.09 ± 1.16 vs 2.54 ± 1.47 , $p < 0.05$), with higher adenoma detection rate (23.3% vs 15.0%, $p < 0.05$).

Although the study was conducted in a single center with small amount of patients including only the afternoon endoscopies, it reached adequate statistical power. The present study concludes on adding lactulose to PGE improves quality outcomes and help patients with long interval P-C, yet further studies are required to validate the results of this single center study. See 23.

Clinical characteristics of small bowel tumors diagnosed by double-balloon endoscopy: Experience from a Chinese tertiary hospital

Small bowel tumors (SBTs) are rare in clinical practice and they constitute approximately 2–5% of all digestive neoplasms with slight male predominance. Their diagnostic challenge comes from lack of clinical symptoms

in early stages and hardness of reaching to lesion site with conventional methods. Double Balloon Endoscopy (DBE) has both diagnostic and therapeutic advantages, comparing to other invasive and non-invasive methods.

In this study, the investigators aimed to determine the characteristics of SBTs in patients who underwent DBE, and compare the clinical performance of DBE with other diagnostic methods. 1102 patients who underwent DBE between 2008 to 2017 were investigated retrospectively and 99 SBTs were detected. The most common indication for DBE was obscure gastrointestinal bleeding (OGIB). Jejunum was the most encountered location and adenocarcinoma was the most frequently detected type of tumor.

This study shows that DBE is a good option for suspected SBTs with high detection rates, despite its several limitations such as the retrospective nature and representiveness of a single center only. See 30.

Correlation between healing type of lesion and recurrence in gastric neoplastic lesions after endoscopic submucosal dissection

Early gastric cancer (EGC) is a mucosal or submucosal lesion confined to stomach without lymph node involvement or distant metastasis, which can be resected endoscopically via endoscopic mucosal resection (EMR) or endoscopic submucosal dissection (ESD). ESD has well-established higher en bloc resection rates and lower recurrence rates (RR) compared to EMR. The main risk factors for local recurrence are piecemeal resection, positive resection margin, size (> 3 cm) and location of lesion.

In the present study, the authors investigated the healing patterns of EGC or gastric adenoma lesions treated with ER, and the rates of local recurrence. They classified lesions as hypertrophic polypoid, scar and nodular type at the surveillance endoscopic appearance of resected area. The most common type of healing lesion was scar type (86.5%). Interestingly, the nodular type of healing was associated with higher local recurrence.

Despite the single center experience and small number of patients, authors concluded that the type of healing lesion in endoscopically resected gastric neoplastic lesions may be the key for reducing recurrence, and endoscopists should pay extra attention to nodular changes on the mucosal surface of ulcerated area. See 36.

Long-term outcomes of endoscopic resection for nonampullary duodenal epithelial tumors: A single-center experience

Nonampullary duodenal epithelial tumors (NADETs) appears in 0.3–1.5% of upper GI endoscopies performed for any reason. The preferred treatment approach has been surgery for a long time due to lack of experience in endoscopic resection methods, namely endoscopic mucosal resection (EMR) and endoscopic submucosal dissection (ESD), and the absence of quality evidence in the literature. The main challenge for endoscopic resection of NADETs comes from the anatomic structure of duodenum such as retroperitoneal placement, thinner walls and narrower lumen comparing to other GI structures.

In this study, the authors investigated the performance of endoscopic resection methods in NADETs retrospectively, all performed by endoscopists with at least 5-years of experience in this field. Fifty-six lesions were found in 54 patients. EMR was the method of choice in 73% of patients, with 82% en bloc resection rate and 54% negative surgical margins. The most common lesion type was adenoma with low grade dysplasia. In a median follow-up period of 25 months, only one patient relapsed.

The present study has several limitations such as small number of patients, relatively shorter follow-up period and lack of adequate patients in ESD arm. Nevertheless, EMR showed excellent results for the treatment of NADETs in the long term, with the advantage of lower procedure time and complications. See 49.

Central neuropeptide-S administration alleviates stress-induced impairment of gastric motor functions through orexin-A

Stress can be caused by mental, physical or emotional factors or a combination of them. The relationship be-

tween stress exposure and functional gastrointestinal disorders is well-established. Neuropeptide-S (NPS) is a novel brain neuropeptide, identified as an endogenous ligand for NPS receptor which is mainly expressed in regions of brain that regulates stress response. In this manuscript, the authors investigated whether central NPS application has any effect on gastric motor functions under stressed conditions, and NPS-induced changes mediated by Orexin-A (OXA) through its receptor OX1R.

The authors used intracerebroventricular cannulation (icv) to access right lateral ventricle of rats for drug delivery. A subgroup icv cannulated rats were also implanted with gastric transducers to measure antral and pyloric motility. Artificial cerebrospinal fluid was used for drug delivery and dimethyl sulfoxide was used for delivery of OX1R antagonist SB-334867. Additionally they obtained brain tissue in a separate group of rats to detect NPSR immunoreactivity. Acute restraint stress (ARS) application caused discordination and significant decrease in amplitudes of antro-pyloric contractions, whereas central NPS administration restored discordination and increased amplitudes. Solid gastric emptying (GE) is also remarkably diminished in ARS loaded group compared to non-stressed rats ($24.4 \pm 3.2\%$ vs. $61.2 \pm 3.4\%$, $p < 0.01$), and also restored completely in central NPS applied group ($62.5 \pm 5.7\%$, $p < 0.01$). Selective OX1R antagonist application over central NPS applied rats showed decreased solid GE.

In conclusion, the current study shows that central NPS administration reverses stress-induced gastric dysmotility and decreased solid GE directly or indirectly over OXA/OX1R system. Further investigations is required to enlighten these pathways which can be used for therapeutic approaches for treatment of functional gastrointestinal disorders. See 65.