Steven Teich, J Gastrointest Dig Syst 2016, 6:7(Suppl)
http://dx.doi.org/10.4172/2161-069X.C1.042

9TH EURO GLOBAL GASTROENTEROLOGY CONFERENCE

Steven Teich

Carolinas HealthCare/Levine Children's Hospital, USA

Shocking the GI tract: Electrical stimulation from top to bottom

Electrical stimulation of the gastrointestinal tract has been touted as a possible therapy for intestinal motor dysfunction since 1963 when Bilgutay, et al., reported the use of transluminal electrical stimulation to induce peristalsis. In the late 1960's and 1970's the myoelectrical activity of the gastrointestinal tract was elucidated along with its relationship to gut contractility. Out of this initial research several clinical applications of gastrointestinal electrical stimulation have arisen. These include gastric electrical stimulation (GES) for treatment of gastroparesis, sacral nerve stimulation (SNS) for treatment of fecal incontinence and constipation, and electrical stimulation of the lower esophageal sphincter (LES) for treatment of severe gastroesophageal reflux disease (GERD). GES is a low energy, high frequency system that stimulates the nerves that innervate the gastric antral muscle. GES improves nausea and vomiting, decreases medical costs, decreases hospital days, and improves quality of life in patients with gastroparesis refractory to dietary and pharmacological interventions. SNS is a low energy, high frequency system that directly stimulates the third sacral nerve root. SNS significantly improves severe fecal incontinence and constipation compared with optimal medical therapy. Electrical stimulation of the LES for treatment of GERD is the newest electrical stimulation therapy. Studies published in the last 2 years demonstrate sustained improvement in GERD outcome and GERD-HRQL, elimination of the need for daily GERD medications, and sustained normalization of esophageal acid exposure compared to standard medical therapy for severe GERD. Electrical stimulation of the gastrointestinal tract continues to have great potential for many GI disorders.

Biography

Steven Teich, MD graduated from The State University of New York at Buffalo College of Medicine. He completed a General Surgery Residency at George Washington University Hospital and a Pediatric Surgery Fellowship at the University of Pittsburgh. He is board certified in General Surgery, Pediatric Surgery, and Surgical Critical Care. He was Director of the Surgical Neuromodulation Program at Nationwide Children's Hospital, Columbus, OH. He has published 57 peer-reviewed papers and 16 book chapters and edited a book entitled Reoperative Pediatric Surgery. He serves on the editorial board of two journals and is an ad hoc reviewer for many journals.

Steven.Teich@carolinashealthcare.org

Notes: