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Media Contact: Gina Steiner  
(630) 570-5635  
gsteiner@asge.org



**American Society for Gastrointestinal Endoscopy**  
3300 Woodcreek Drive  
Downers Grove, IL 60515

P (630) 573-0600  
F (630) 963-8332  
[www.asge.org](http://www.asge.org)  
[www.screen4coloncancer.org](http://www.screen4coloncancer.org)

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### **HIGHLIGHTS FROM THE MAY ISSUE OF *GIE: GASTROINTESTINAL ENDOSCOPY***

**DOWNERS GROVE, Ill. – May 4, 2015** – The May issue of *GIE: Gastrointestinal Endoscopy*, the monthly peer-reviewed scientific journal of the American Society for Gastrointestinal Endoscopy (ASGE), features a meta-analysis pointing to botulinum toxin A as a possible obesity treatment; a study reporting that, in some cases, it may be safe to store endoscopes longer than five days after reprocessing; and an article reviewing a promising group of procedures for patients with advanced illness from gastric obstruction.

#### **“Effect of intragastric injection of botulinum toxin A for the treatment of obesity; a meta-analysis and meta-regression”**

The prevalence of obesity has been increasing worldwide as has its related morbidity and mortality for various conditions including cancer, cardiovascular and metabolic diseases. Medical therapeutic approaches have been shown to have limited effect. Bariatric surgical treatments, such as gastric banding and bypass, while more effective, are invasive procedures that can result in serious adverse events. Injection of botulinum toxin A within the stomach via endoscopy is thought to work by delaying the emptying of food from the stomach during digestion and causing patients to feel full sooner.

Studies have shown conflicting results in outcomes such as body weight reduction, speed of stomach emptying and onset of satiety. The researchers in this study aimed to assess, through meta-analysis and meta-regression, the efficacy of intragastric (within the stomach) botulinum toxin A injection for the treatment of obesity.

After identifying more than 232 articles on this topic, the researchers narrowed the analysis to 7 studies with a total of 115 patients—79 treated vs. 36 placebo. Each study included pre- and post-injection measurement of body weight. The analysis did not reveal the exact mechanism by which botulinum toxin contributes to weight loss, whether by delaying gastric emptying or inhibition of gastric contractions, or some other mechanism. However, the studies all showed statistically significant body weight loss, and all showed significant weight loss in treated patients compared with placebo-only patients. The analysis also showed that certain doses (or multiple injections) and locations of the injection could affect the outcome. The authors deduced that intragastric injection of botulinum toxin A is effective for the treatment of obesity; however, they note that larger studies are needed, with a longer follow-up period, in order to be conclusive. [http://www.giejournal.org/article/S0016-5107\(14\)02595-4/abstract](http://www.giejournal.org/article/S0016-5107(14)02595-4/abstract)

## **“Endoscope storage time: assessment of microbial colonization up to 21 days after reprocessing”**

Medical devices and instruments that are not disposable are thoroughly cleaned and disinfected after use to prevent passing infections from one patient to another. For some of these pieces of equipment, there is concern about possible microbial colonization on or in the device even after it has been cleaned and stored. For endoscopes, at least high-level disinfection is recommended by the American Society for Gastrointestinal Endoscopy and other professional societies, and is achieved through a multi-step system referred to as “reprocessing.” Endoscopes are hung in special drying environments after cleaning to inhibit growth of bacteria. However, data are insufficient to recommend definitively how long endoscopes can be stored after reprocessing. Hospitals and other healthcare centers determine their own reprocessing intervals, with many as short as five days. The researchers in this study sought to determine whether flexible endoscopes may be stored for as long as 21 days after reprocessing without colonization by pathogens.

At a tertiary care center, researchers studied four duodenoscopes, four colonoscopes, and two gastroscopes after reprocessing and hanging. They performed microbial testing of multiple sites on each scope, obtaining cultures on the day of reprocessing, then seven, 14 and 21 days later. There were 33 positive cultures from 28 of the 96 sites tested (29.2 percent overall contamination rate). Twenty-nine of 33 isolates were typical skin or environmental contaminants, thus clinically insignificant. Four potential pathogens were cultured, including *Enterococcus*, *Candida parapsilosis*,  $\alpha$ -hemolytic *Streptococcus*, and *Aureobasidium pullulans*; all were likely clinically insignificant as each was only recovered at one time point at one site, and all grew in low concentrations. There were no definite pathogenic isolates.

Although the single-center study was limited in size, the results were consistent with previous studies showing insignificant microbial colonization beyond five days of storage. The authors concluded that endoscopes can be stored for as long as 21 days after standard reprocessing with a low risk of pathogenic microbial colonization. Extension of reprocessing protocols to 21 days could translate to significant cost savings.

[http://www.giejournal.org/article/S0016-5107\(14\)02273-1/abstract](http://www.giejournal.org/article/S0016-5107(14)02273-1/abstract)

**Editor’s note:** There have been reports of transmission of multidrug-resistant bacteria in specific types of endoscopes. The ASGE has recommended that institutions have additional protocols in place for these types of endoscopes, in addition to standard reprocessing, to prevent transmission of these multidrug-resistant bacteria . See [Multisociety guideline on reprocessing flexible gastrointestinal endoscopes: 2011](#) and [ASGE Interim Guidance](#).

There is an accompanying editorial to this study, “Endoscopic hang time; can we get some clarity?” [http://www.giejournal.org/article/S0016-5107\(15\)00144-3/abstract](http://www.giejournal.org/article/S0016-5107(15)00144-3/abstract)

## **EUS-guided gastroenterostomy: a new promising technique in evolution**

This “Thinking Outside the Box” article offers a look at EUS-guided gastroenterostomy (GE), a group of endoscopic procedures that show promise for alleviating the manifestations of malignant gastric outlet obstruction in some patients. The authors review several different approaches to EUS-guided GE using balloons and/or stents to dilate the obstruction, and discuss their potential for treating terminally ill patients for whom the risks of surgical intervention are prohibitive.

[http://www.giejournal.org/article/S0016-5107\(14\)02624-8/abstract](http://www.giejournal.org/article/S0016-5107(14)02624-8/abstract)

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### **About the American Society for Gastrointestinal Endoscopy**

Since its founding in 1941, the American Society for Gastrointestinal Endoscopy (ASGE) has been dedicated to advancing patient care and digestive health by promoting excellence and innovation in gastrointestinal endoscopy. ASGE, with more than 13,000 members worldwide, promotes the highest standards for endoscopic training and practice, fosters endoscopic research, recognizes distinguished contributions to endoscopy, and is the foremost resource for endoscopic education. Visit [www.asge.org](http://www.asge.org) and [www.screen4coloncancer.org](http://www.screen4coloncancer.org) for more information and to find a qualified doctor in your area.

### **About Gastrointestinal Endoscopy**

Gastrointestinal endoscopic procedures allow the gastroenterologist to visually inspect the upper gastrointestinal tract (esophagus, stomach and duodenum) and the lower bowel (colon and rectum) through an endoscope, a thin, flexible device with a lighted end and a powerful lens system. Endoscopy has been a major advance in the treatment of gastrointestinal diseases. For example, the use of endoscopes allows the detection of ulcers, cancers, polyps and sites of internal bleeding. Through endoscopy, tissue samples (biopsies) may be obtained, areas of blockage can be opened and active bleeding can be stopped. Polyps in the colon can be removed, which has been shown to prevent colon cancer.