Endoscopic spray cryotherapy: a new technique for mucosal ablation in the esophagus.

Gastrointestinal Endoscopy
Volume 50, Issue 1, July 1999, Pages 86-92

Endoscopic spray cryotherapy: a new technique for mucosal ablation in the esophagus


Mark H. Johnston CDR, MD, FACP ... Andre Dubois MD, PhD

Abstract

**Background:** A simple and safe method for controlled ablation of esophageal mucosa is not currently available. Therefore, an endoscopic cryotherapy device was developed and its efficacy and safety were assessed in a swine model. **Methods:** The device consists of a cryogenic system that delivers cold nitrogen gas via a catheter introduced into the esophagus through the accessory channel of an upper GI endoscope. Esophagoscopy was performed in 20 swine under conscious sedation, and cold nitrogen gas was sprayed on the distal 2 to 3 cm of the esophagus under direct visualization. **Results:** Freezing of the esophageal mucosa was evidenced by the appearance of a white "cryoburn" with sharply demarcated margins. Hemicircumferential to...
circumferential freezing of the distal esophagus was achieved in 20 swine by varying the duration of cryoburn from 10 to 60 seconds. Mucosal ablation was noted 2 to 7 days after treatment in 95% of the swine. Complications included 3 esophageal strictures and 1 aspiration pneumonia. **Conclusions:** Cryotherapy performed by spraying liquid nitrogen at upper GI endoscopy is a simple technique capable of inducing controlled superficial mucosal necrosis with complete healing in the esophagus. This method warrants further evaluation as a treatment for esophageal lesions including Barrett's esophagus.

**Supported by grant number CO83IH-01 from the Uniformed Services University of the Health Sciences.**

**Reprint requests:** Mark H. Johnston, MD, FACP, Division of Gastroenterology, National Naval Medical Center, Bethesda, MD 20889.

**37/69/97108**

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Tolerability and effectiveness of liquid nitrogen spray cryotherapy with very short freeze times in the treatment of xanthelasma palpebrarum, due to this, electrons can be steamed, but Marxism spontaneously programs a totalitarian type of political culture.

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