Electrical stimulation therapy of the lower esophageal sphincter in treating gastro-esophageal reflux disease in children, open label prospective trial

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Background: Electrical stimulation therapy (EST) of the lower esophageal sphincter (LES) is a new treatment for Gastro-esophageal reflux disease (GERD) that has been used in adult patients, in this paper we describe the first three cases in children with GERD, treated with EST. This device improves the pressure of the LES without interfering with its relaxation. Our aim is to describe the first three cases in pediatric population in the world with the use of ENDOSTIM, shows an alternative in the treatment of GERD by electrical stimulation.

Methods: Three patients with GERD, chronic pain, semi choking episodes, regurgitation that didn’t respond to proton inhibitors, abnormal esophageal pH, hiatal hernia less than 3 cm, Los Angeles grade C esophagitis by endoscopy, chronic esophagitis by acid reflux reported by pathology, abnormal pressures in esophageal manometry.

Results: We included 3 patients with GERD with the following criteria, pH, manometry endoscopy follow up 1, 3, 6 and 12 postsurgical months.

Patient-1: Comorbidity, MODY diabetes, Bud Chiari syndrome, baseline, symptoms daily, pH Demeester index 68.5, manometry 14.7 mmHg, endoscopy (esophagitis) grade C, medication daily, 12th month follow up symptoms absent, pH Demeester index 9, manometry 23 mmHg, endoscopy normal, medication none.

Patient-2: Comorbidity, down syndrome, heart disease corrected at birth, low weight, baseline, symptoms daily, pH 95% reflux cough and blench, manometry 14.7 mmHg, endoscopy (esophagitis), grade C, medication daily, 12th month symptoms absent, pH 0% reflux, manometry 16 mmHg, endoscopy normal, medication none.

Patient-3: Comorbidity, down syndrome heart disease corrected at birth, lox birth, diaphragmatic paralysis corrected, low weight, recurrent pneumonias, baseline symptoms daily, pH 95% reflux, cough, manometry 14.7 mmHg, endoscopy (esophagitis) grade C, medication daily, 6th month, symptoms absent, pH 0% reflux, manometry 16 mmHg, endoscopy normal, medication none.

Conclusion: The results show that electrical stimulation of the LES can improve symptoms of GERD, reduce esophageal acid exposure by augmenting esophageal sphincter pressures and reduce the need for PPI medication without Gastro esophageal side effects typically seen with other anti-reflux procedures that involve mechanical alteration of the gastro-esophageal junction.

Biography
Rodrigo Hipolito Cifuentes has completed his studies in pediatrics at the Hospital Infantil de Mexico. He is the Head of service of Pediatric Endoscopy at Hospital Infantil Privado.

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