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Short Communication

The Odyssey of an Idea: The Control of Gastroesophageal Reflux

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Abstract

This is the story of an idea from my medical school days which proved useful many years later when I used that idea for a different purpose.

Keywords: *Gastroesophageal Reflux; Adenocarcinoma; Gastroesophageal Sphincter*

As a surgical clerk, in 1954, I assisted the Pediatric surgeon, Dr. Willis J. Potts, of Northwestern University, in an operation aimed at correction of anal incontinence of a male child. Repeated surgical attempts at correcting congenital atresia had resulted in anal incontinence.

After dissecting the right gracilis tendon as a muscular pedicle, be subcutaneously placed it around the child's anus. This procedure effectively corrected the incontinence. Other workers have stressed the effectiveness of the pedicle procedure to correct anal incontinence [1].

Several years later, my efforts started focusing on the correction of incontinence or insufficiency of a different sphincter; the gastroesophageal sphincter, in which reflux can result in pain in several anatomic areas: the abdomen, chest front and/or back, neck and even the left ear [2]. Their symptoms can mimic cholecystitis, peptic ulcer, spinal arthritis or angina pectoris. Serious complications can occur such as bleeding esophageal ulcerations, strictures, severe pulmonary complications, change in voice and most importantly adenocarcinoma [3].

In 1959, Fundoplication was introduced by Nissen. This procedure was improved by esophageal lengthening by Collis in 1964 [5]. Collis transected the gastric fundus so as to prolong the esophagus, suturing the cut sides and thus comfortably placing the fundoplications under the diaphragm.

In 1975, we simplified the above procedure by stapling the fundus, creating an esophageal prolongation without cutting the fundus [6,7]. In 1998, I reported excellent 25-year results [8].

In 1983, we reported 5-year excellent results of a Y-V Cardioplasty performed to treat recurrent reflux and strictures subsequent to procedures for achalasia. We used the Pyloroplasty procedure reported by Moshel, Walske and Neurmayor [9].

Esophagectomy for Cancer or benign disease has resulted severe reflux and fatal pulmonary complications and disability in 75% of survivors [10,11]. Based on the experience of my youth while assisting Dr. Willis J. Potts in a vascular pedicle to correct anal incontinence, I thought that an intercostal muscle pedicle may correct Gastroesophageal Reflux.

In 1995, we reported 26 years of experience performing the Intercostal Pedicle Esophagogastropexy [12] (Figure 1 and 2). This procedure resulted in patient's comfortable sleeping in their own bed after years of upright resting before and after Esophagectomy.

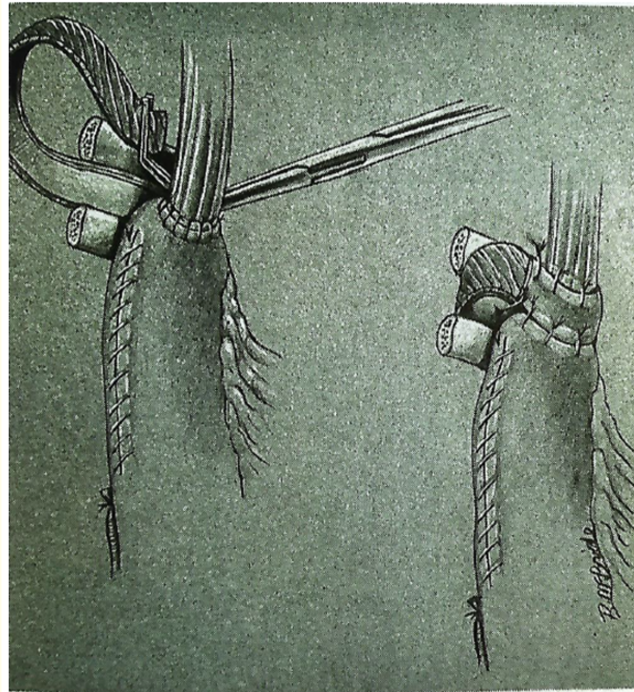

Figure 1: *Right: Satinsky clamp grasping pedicle. Left: Pedicle circling anastomosis has been sutured to esophagus, stomach and parietal pleura.*

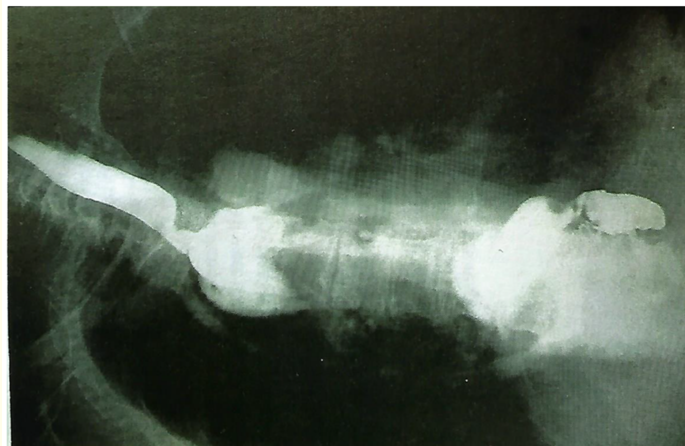

Figure 2: *Esophagram in anteroposterior view showing typical angle created by the pedicle esophagagostropexy.*

Dr. James Mark and Dr. Lucius Hill have reported to me excellent results doing the procedure years after the Esophagectomy. Thus, my odyssey of the fight against reflux ended and I was ready to come back to Ithaca.

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