

Discussion

DR. BRUCE D. SCHIRMER (Charlottesville, Virginia): Thank you, President Cameron, Secretary Copeland, Members, and Guests. I want to congratulate Dr. Laws on his fine presentation and paper, which attempts to answer the question of whether a laparoscopic Nissen or a Toupet procedure offers better results for the patient with symptomatic gastroesophageal reflux disease. His operative results are excellent, and because of this, despite the appropriate design of the paper, the numbers of patients that would need to be enrolled in such a study, based on the incidence of only 5% adverse outcomes, would number in the several hundred range before we could arrive at a clear answer. However, I question whether such a study is necessary, because it seems that both procedures, in general, are highly effective. I wonder whether Dr. Laws agrees with this conclusion or whether he feels that further pursuit of such a study is indicated.

My second question for you, Henry, is did you use your preoperative esophageal manometry data to influence enrolling patients in the study? You said you excluded patients with dysmotility, but it has been our practice to select patients with preoperative low-amplitude esophageal peristalsis to receive a Toupet procedure, being concerned about the potential for postoperative dysphagia in these patients should they receive a complete wrap.

Finally, I want to add a comment from my own experience with these operations. In my personal series of over 80 laparoscopic Nissen funduplications, performed by dividing the short gastric vessels and creating the wrap over a 60 Fr Maloney dilator, there have been two patients that had prolonged postoperative dysphagia. In both of these patients, reoperation with laparoscopic revision of the Nissen to a Toupet procedure resulted in complete relief of symptoms and only a 2-day postoperative hospitalization for both patients. So for any of you who have such patients, I would recommend not being afraid to reoperate using a laparoscopic approach and revision.

I want to thank Dr. Laws for furnishing me with a copy of the manuscript, and the Association for the privilege of the floor.

DR. GENE BRANUM (Atlanta, Georgia): Thank you, Dr. Laws, for giving me the manuscript to review. With 10% of the American population having daily symptoms from heartburn, and a significant percentage of those having severe symptoms, the quality of life for patients with this severe disease is roughly that of patients with congestive heart failure by symptom scores.

Although it is not as glamorous as pancreatic cancer, patients with severe disease do not die from their disease, they just wish they were dead. Moreover, the treatment of gastroesophageal reflux disease is expensive, with more than 10 billion dollars a year being spent on drug therapy.

The feeling of many who treat this disease is that a complete wrap should work better, but the complex physiology of the hiatus and gastroesophageal junction is probably restored to a relatively normal situation by either operation.

Some of the worries that arise with this treatment, Dr. Laws, are regarding the long-term results: does a Toupet last as long as a Nissen? Whereas an intact Nissen cannot reflux, by physiologic testing, a Toupet that is still effective in decreasing symptoms can reflux. So is it your feeling that, in the long-term, a Toupet operation a decade from now will work as well as a Nissen?

In addition, expanding on one of Dr. Schirmer's questions, what are your plans for the follow-up of these patients in terms of symptom scores, pH, and motility testing? Do you plan to do that?

With around 500 patients undergoing these two operations, one thing we found at Emory that has aided with follow-up is, if you pay the people \$100 to come back and get tested, they usually will.

Thank you, Dr. Cameron and Dr. Copeland.

DR. HENRY L. LAWS (Closing Discussion): I would like to thank Dr. Schirmer and Dr. Branum for their remarks.

I agree that we had inadequate numbers, and I would like to do five times as many and come up with a more definite answer. On the other hand, I do believe, as does Dr. Schirmer, that both of these operations offer an excellent result from a clinical perspective. We did delete two or three patients from this study because they had very low amplitude in their esophageal motility, but that was all. Those patients were proffered a Toupet rather than being randomized within the study.

At the time of randomization, we had the stomach fundus cleared before we randomized the patient to one or the other wrap.

I noticed in Dr. Bell's series that he did reoperate on three people and converted a complete wrap to a partial wrap with alleviation of symptoms, as did Dr. Schirmer. I have not had the courage to reoperate on anybody, or maybe even the need. But I do think that I would try that next time, and I laud him for that.

What about the Toupet long term? I do not know. I do believe that it will be long lasting, just as the others are, because we have actually not had recurrent symptoms in this group of patients. From talking with Dr. McKernan, who has done more than I, he has not had that problem either.

Dr. Branum, I am embarrassed that we could not do more motility and, particularly, pH testing postoperatively—which we were doing for free. I envy the Emory group, but I do not have \$100 per patient, and I believe that might have influenced those people. I commend you for that; I wish we could do the same.

I would like to thank the commentators; I would like to thank the organization for allowing me to present this paper.