



## The authors reply

We appreciate Dr. Awad's comments but more importantly his interest and time taken to discuss our manuscript. Instead of reiterating and again referencing the literature about the incidence of short esophagus as we did in our original manuscript [34], we will concisely address his questions and concerns. Dr. Awad has some excellent points that should be followed by all esophageal surgeons: The gastroesophageal junction should be identified; esophageal mobilization should be performed adequately; after mobilization, esophagus should be in the abdomen without being placed in tension.

Reliance on the phrenoesophageal attachment in patients with a large hiatal hernia is impossible since the phrenoesophageal attachment has always been obliterated. As stated in our methods, a lighted bougie was utilized in our procedure. Thus, the identification of the gastroesophageal junction was done by visual examination. With a lighted bougie, it is easy to determine the esophagus (which has no serosal layer) and the stomach (which has serosa). Although endoscopy could be used to locate the gastroesophageal junction, the expense of intraoperative endoscopy is not needed with the use of the lighted bougie.

Dr. Awad mentions preoperative risk factors for short esophagus. The only factors that seem to be related to "short esophagus" are esophageal strictures and large hiatal hernias. Endoscopic, manometric, or radiological evidence of "short esophagus" do not demonstrate consistent operative findings. We refer him to our results section for data concerning esophageal strictures and large hiatal hernias [4].

Esophageal mobilization can be done safely and sometimes more easily with a laparoscope since most esophageal surgeons understand that this area is better visualized laparoscopically. Adequate mobilization is easily verified visually when > 3 cm of the esophagus is intraabdominal. Although Dr. Awad's believes that our 100% success in mobilizing appropriate esophageal length is "unmatched," it truly is not. Other esophageal surgeons have no issue in mobilizing esophageal length of > 3 cm even if the esophagus appears shortened and have found no need to perform a lengthening procedure in > 800 cases (personal communication at Southeastern Surgical Congress, Atlanta, GA January, 2004 by Rosemurgy A, Tampa, FL). Even those who discuss short esophagus have suggested that esophageal mobilization can be utilized to avoid esophageal lengthening [2].

As Dr. Awad's first reference admits, the issue of "esophageal shortening is one that polarizes surgeons like few other in esophageal surgery" [1]. This controversy is noted in a recent report also demonstrating that a "short esophagus" is one of those overemphasized and overtreated phenomena [3]. Just like us and other esophageal surgeons, they believe that a short esophagus is a myth.

Dr. Awad cautions acceptance of our conclusions; we caution esophageal surgeons to perform appropriate esophageal mobilization before relying on esophageal lengthening procedures when encountering a "short esophagus." Our data from > 600 patients [4] demonstrate that esophageal mobilization is possible without the need of an esophageal lengthening procedure and its associated complications.

### References

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2. Gastal OL, Hagen JA, Peters JH, et al. (1999) Short esophagus: Analysis of predictors and clinical implications. *Arch Surg* 134: 633–638
3. Korn O, Csendes A, Burdiles P, et al. (2003) Length of the esophagus in patients with gastroesophageal reflux disease and Barrett's esophagus compared to controls. *Surgery* 133: 358–363
4. Madan AK, Frantzides CT, Patsavas KL (2003) The myth of the short esophagus. *Surg Endosc* 18: 31–34

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