

## **Does Intraesophageal Bougie Use Prevent Post-operative Dysphagia in Laparoscopic Nissen Fundoplication?**

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*Background:* It is yet unknown what contributes to the variable degrees of post-operative dysphagia following a laparoscopic Nissen fundoplication (LNF). Previous studies have not found a contributing factor to post-operative dysphagia. This study reviews the effect of procedure practices, especially Bougie device use, that could be possible contributors to post-operative dysphagia.

*Methods:* A retrospective study was conducted of patients who had undergone LNF procedures from 2012 – 2014. All demographic and procedure characteristics were recorded and compared between groups with Bougie (WB) and without Bougie (WOB). Association of all available factors with any post-operative dysphagia were evaluated using univariate and multivariate logistic regression analysis.

*Results:* A total of 127 patients (89 female) were operated on by 4 surgeons. A Bougie device was used in 99 (78%) cases, and 38 (30%) patients experienced some degree of post-operative dysphagia. There was no significant difference between WB and WOB groups demographically. WOB cases tended to have a longer operative time (134.3 min ± 43.6 vs 95.8 min ± 46.3;  $P < 0.001$ ) and estimated blood loss (47.5 mL, (95%CI:28 – 68) vs 24 mL (95%CI: 19 – 29,  $P = 0.001$ ). Post-operative dysphagia was not associated with use of Bougie device (OR=0.99 (0.38-3.44),  $P = 0.81$ ). The success rate of the dilation procedure was not associated with prior utilization of Bougie in the primary surgery (OR= 0.9, 95% CI: 0.12-6.5).

*Conclusions:* Use of Bougie was correlated with shorter operative time and less bleeding; however, post-operative dysphagia does not appear to be associated with its use in laparoscopic Nissen fundoplication. Data analysis did not suggest any other contributors to post-operative dysphagia. Further studies with larger number of surgeons are suggested in order to evaluate the effect of surgeon experience on outcomes.