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## Does sleeve shape on perioperative contrast swallow predict post operative reflux?

Category: Outcomes from Bariatric Surgery

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**Introduction-** The shape of the sleeve is considered an important determinant of outcome with respect weight loss and side effects, particularly reflux. Emphasis is placed on avoiding narrowing of the incisura and on near total excision of the fundus.

Many surgeons perform routine post operative contrast imaging to document integrity of the staple line and the shape of the resultant sleeve. Even when felt that fundal resection had been performed adequately, the contrast study often reveals an apparent larger than expected residual fundus.

This study aims to determine if such appearance predicts the development of reflux or impairs weight loss.

**Methods-** 102 consecutive patients in a single surgeon series were studied. Standardized routine post-operative swallow performed. An independent blinded assessor classified the apparent shape of the sleeve into 2 groups - "ideal shape" and "large fundus" validated by objective imaging software. A second independent blinded investigator assessed symptoms of reflux, dysphagia (Dakkak score), VISIK score and weight loss.

**Results-** The average follow up period was 28 months (19-42 months). There was no significant difference between patients in the "ideal fundus" vs "large fundus" groups with respect excess weight loss at 12 months (65.9% vs 66.5%,  $p=0.93$ ) heartburn score ( $1.0\pm 1.9$  vs  $1.1\pm 1.9$ ,  $p=0.87$ ), regurgitation score ( $0.8\pm 1.7$ ,  $0.9\pm 1.7$ ,  $p=0.83$ ), Dakkak ( $40.5\pm 5.7$ ,  $41.7\pm 5.1$ ,  $p=0.52$ ) or VISIK scores. However, although not reaching statistical significance, there was a greater use of PPI's in the "ideal fundus" group compared to the large fundus group (42% vs 13%,  $p=0.09$ ). Neither fundal size nor body:fundus ratio correlated with or predicted post operative reflux. In a multivariate analysis, only pre-operative reflux was a predictor for post-operative reflux (OR 6.6,  $p = 0.014$ ).

**Conclusion -** An apparent large fundus on perioperative contrast swallow does not predict postoperative reflux or poor weight loss and need not precipitate early re resection.