033

LAPAROSCOPIC FUNDOPLICATION IN NEONATES AND YOUNG INFANTS: FAILURE RATE AND NEED FOR REDO FUNDOPLICATION AT A HIGH-VOLUME CENTER

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Aim of the Study: Present the outcomes of patients younger than 2 years who underwent laparoscopic fundoplication, highlighting the failure rate and need for redo fundoplication.

Methods: Retrospective review of patients < 2 years who underwent laparoscopic fundoplication between January 2009 and December 2014. Patients initially operated elsewhere and patients > 2 years were excluded from the study.

Main Results: 457 infants younger than 2 years underwent laparoscopic fundoplication at our hospital in the 6-year analyzed period. 360 underwent a Nissen, 77 a Toupet and 21 a Thal fundoplication. There were no demographic differences among the three subgroups. Median age at surgery was 5 (1-23) months. Medan follow up was 3 (1-6) years. The conversion rate to open surgery was 0.8% (4 of 457 cases). Patients did not undergo invasive studies to assess the incidence of postoperative GER, but were instead followed clinically. Failure of the laparoscopic fundoplication was diagnosed when a patient was unable to gain weight and/or protect the airway while receiving gastric feedings due to clinically obvious postoperative GER. The overall failure rate in our experience was 2.8% (12 redo fundoplications in 457 cases [11/360 Nissen, 1/77 Toupet and 0/21 Thal]). All failed cases occurred due to upward migration of the wrap, confirmed preoperatively by a contrast study. Eleven redo fundoplications were done laparoscopically and one by laparotomy. Median time between the initial fundoplication and the redo was 13 (5-27) months. In the contemporaneous group of patients <2 years who underwent open fundoplication (n= 101) there were no failures/redo fundoplications.

Conclusion: The need for a redo fundoplication after a laparoscopic fundoplication was an uncommon event in our experience (12 of 457 cases). Our results contrast with published studies that report higher failure rates. Case volume per surgeon may explain in part the dissimilar results among studies.