EXAMINING THE LEARNING CURVE OF LAPAROSCOPIC FUNDOPLICATIONS AT AN URBAN COMMUNITY HOSPITAL

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Background: Laparoscopic fundoplication has become recognized as an alternative treatment for gastroesophagel reflux disease. This procedure is associated with specific complications, especially in a surgeon's early experience. We sought to define the learning curve of this procedure at our tertiary community institution.

Methods: We conducted a retrospective review of the first 100 cases performed between January 1995 and April 2002 at our hospital. Two surgeons performed the majority of the surgeries and routinely assisted each other. Patients were grouped chronologically with the first fifty cases defined as early institutional experience and a surgeon's first twenty cases defined as early personal experience.

Results: The conversion rate was 0% and the reoperation rate was 1% for the series; neither were affect by the learning curve. Operative time was longer in both the early institutional (117.8 vs. 91.3 minutes, $p<0.001$) and personal experience (126.8 vs. 89.7 minutes, $p<0.001$). The rate of dysphagia requiring intervention was higher during the early institutional (22% vs. 4%, $p=0.017$) but not personal experience (19% vs. 8%, ns). The mean length of stay was 2.5 ± 1.4 days and the readmission rate was 5%; these outcomes were unaffected by the learning curve.

Conclusions: There is a definable learning curve in laparoscopic fundoplication in terms of operative time. However, we observed an acceleration of the personal learning curve in terms of dysphagia with a two-surgeon collaborative approach. With careful patient selection conversion, reoperation, readmission and complication rates equivalent to experienced centers can be achieved in the community setting early in the personal and institutional experience.