



# THE USEFULNESS OF GASTRO-ESOPHAGEAL REFLUX TEST DECIDING SURGICAL INDICATION AND THE RESULTS OF LAPAROSCOPIC NISSEN FUNDOPLICATION FOR GERD PATIENTS

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## INTRODUCTION

The indication of laparoscopic anti-reflux surgery for GERD patients is difficult to be judged fairly. We have established “Reflux Test” as the tool for the decision in the surgical indication for GERD patients.

## SURGICAL INDICATION

### Reflux Test

At the standing position a patient swallows 300ml barium solution. After total solution goes into stomach, a patient lies down at the flat position.

Then a patient changes the position to left lateral decubitus position, flat position, right lateral decubitus position and flat position again every 10 seconds in the order.

During this procedure, gastro-esophageal reflux was evaluated and assigned to severe, moderate and slight category. If the reflux was observed slightly up to cervical esophagus, the case was assigned to moderate category. If the reflux was observed intensely up to cervical esophagus, the position was returned to head high position for the safety and the case was assigned to severe category. The anti-reflux surgery was considered in the moderate and severe categories.

## RESULTS

We have performed laparoscopic Nissen procedure in 105 cases. Median follow-up period of this study was 63 months (0-118 months). In 14 cases (13.3%) PPI was restarted before 6 months after the anti-reflux surgery. In 27 cases (25.7%) PPI was restarted after the anti-reflux surgery during the whole follow-up period of this study. The results of the study have shown that the reflux esophagitis was improved obviously after the anti-reflux surgery even in the PPI restarted group ( $p < 0.001$ ).

## DISCUSSION

The number of GERD patients who needed anti-reflux surgery seems to be so high. To extract the patients who needed it remarkably is important. The anti-reflux surgery is most effective for the patients who really have the obvious reflux. Reflux Test is feasible because of its convenience and visual effects for the patients. The results of the laparoscopic Nissen fundoplication were good and satisfied by the patients mostly.

