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OUTCOME OF MEDICAL VERSUS SURGICAL THERAPIES FOR GASTROESOPHAGEAL REFLUX DISEASE: META ANALYSIS OF RANDOMIZED CONTROLLED TRIALS

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Background: Gastroesophageal Reflux Disease is one of the most common chronic gastrointestinal tracts. Medical management includes use of antisecretory medications or surgical management. Randomized controlled trials have compared both forms of treatment with controversial results. Therefore, we conducted meta-analysis to compare medical versus surgical therapy of GERD.

Methods: MEDLINE, Cochrane Central Register of Controlled Trials & Database of Systematic Reviews, Pub Med, and recent abstracts from major conference proceedings were searched (05/2010). RCT's comparing the two treatment options were included. Standard forms were used to extract data. The effects of both the methods were analyzed by calculating pooled estimates for symptom remission, complications and cross over to other techniques or need for other therapies for symptom control. Separate analyses were performed for each outcome by using odds ratio (OR) by fixed and random effects models. Publication bias was assessed by funnel plots. All were graded by Jadad score. Heterogeneity among studies was assessed by calculating I² measure of inconsistency.

Results: Four trials met inclusion criteria. Trials were of adequate quality (Jadad score \geq 2). Three trials used open technique, one trial used laparoscopic technique. No significant heterogeneity was noted for major outcomes. Need for additional antisecretory medication is significantly higher in surgical group versus medical group (OR 4.79; 95% CI: 1.71-13.44, $p < 0.01$). Funnel plot revealed no publication bias.

Conclusions: Both medical and surgical therapies are effective in symptom control with similar number of complication but in the surgical group more patients are started back on antisecretory medications.