

Results in Antireflux Surgery, an Analysis of Case-Controlled Cohorts versus Multicenter Studies and Meta-Analyses

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Abstract

Introduction: With the advent of minimally invasive techniques, laparoscopic Nissen fundoplication and Toupet partial fundoplication have been very successful in the management of GERD. In the past 10 years, a number of very attractive new technologies have entered the market around therapeutic GERD-management such as Transoral Incisionless Gastroplication, other endoscopic plication techniques, and the implantation of the magnetic sphincter augmentation (MSA). These new technologies are excessively promoted by the respective companies, propagating their techniques as causing fewer side effects. The purpose of this paper is an overview on the success-rates of these differently used techniques and technologies and, in addition, different study-designs.

Methods: A literature review was performed searching for publications on laparoscopic fundoplication (LF), Transoral Incisionless Fundoplication (TIF), and laparoscopic MSA. The reported classified were separated according to their design into (group 1) large case-controlled series or comparative studies (n > 100 cases) from high-volume centers and into (group 2) trials between different technologies of antireflux procedures, multicenter-studies, and meta-analyses of GERD-trials.

Results: In total, 4030 abstract were screened according to the selected key words. Following the section criteria, 19 publications were selected and analyzed. Regarding group 1 and LF (selected studies 2565 patients), the morbidity ranged from 2.0-4.8 % of cases. With a follow-up time of 36-222 months most of these patients were followed > 5 years. In group 2, more than 150 studies and several multicenter-registries were summarized in these 9 selected publications. The overall follow-up periods were substantially shorter with a range of 7-48 months.

Conclusions: It can be concluded that special efforts in patient management in high volume centers and a vast experience may substantially contribute to excellent results for several antireflux techniques, which may reach a level of quality above results of registries and meta-analyses.

Key words: GERD, antireflux surgery, laparoscopic fundoplication, laparoscopic Nissen fundoplication, laparoscopic Toupet fundoplication, endoscopic antireflux procedures, magnetic Sphincter augmentation, Linx