LINX Reflux Management System — Is it a permanent solution for GERD?

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Madam, gastroesophageal reflux disease (GERD) is a common disorder with <10% prevalence in East Asia alone. Since 1995, there has been a gradual increase in its incidence.[1] It is a very common reason for consultation in primary care. GERD can cause Barret's esophagus which has 0-3% risk of transformation into esophageal adenocarcinoma.[2] The hallmark symptoms at presentation are heartburn and regurgitation. Diagnosis is done by esophageal manometry and upper GI endoscopy. GERD is treated with proton pump inhibitors (PPI) with a 40% failure rate.[3] Nissan fundoplication is the surgical gold standard treatment for GERD but is not commonly used due to complications related to surgery. Hence, patients continue with pharmacological therapy despite inadequate symptoms control.

LINX Reflux Management System was introduced as an alternate to Nissan fundoplication and was approved by FDA in March 2012.[4] It is a device consisting of a ring of magnetic beads that is placed laparoscopically around the gastroesophageal junction. When the swallow, vomit or belching mechanism is initiated, the peristaltic pressure overcomes the magnetic attraction and the sphincter opens to allow passage of food and gas. As the peristaltic pressure drops, the magnetic attraction overcomes it and the sphincter closes. This device enhances the function of LES without compromising its physiological function or anatomy.[3] Eric et al[5] compared the outcomes of LINX management with Laparoscopic Nissan Fundoplication (LNF) and concluded that both are safe and effective procedures with 75% and 83% patients reporting resolution of symptoms, respectively. A greater number of patients complained dysphagia requiring endoscopic dilation with LINX compared to LNF (50% vs 0%, p= 0.01). However, less bloating, flatulence or diarrhoea occurred with LINX (0% vs 33). LINX also had a shorter operative time (64min vs 90 min, p= < 0.001) and greater self-referral (58 vs. 0 %, p < 0.001). LINX patients were started on a liquid diet immediately and most were discharged the following day on a solid diet. LNF patients were maintained on a liquid diet for 1 week post-op before advancing to a solid diet. Length of hospital stay and inpatient narcotic use was similar for both.[5]

The complication of dysphagia requiring dilation is higher in this study compared to others,[2] possibly due to differences in threshold for proceeding to dilation.Since it is reported to reduce reflux and PPI usage, LINX Management seems to be a promising therapeutic option that also overcomes some of the limitations of current therapies including LNF. With lesser GI side effects and faster return to daily routine life post-operatively,it may provide a permanent solution to resolve GERD.[5] However, further studies are required to prove the efficacy of LINX in the long term management of GERD.

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