



## Editorial

## Sleeve gastrectomy. A point of technique

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Surgical technique  
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Leak  
Gastro-oesophageal reflux  
Gastric bypass

Sleeve gastrectomy is a surgical technique producing volume restriction with early satiety and a corresponding fall in the appetite stimulating hormone ghrelin [1]. It may be offered as the first stage of a gastric bypass or duodenal switch or as the definitive surgery for obesity [2]. The technique is particularly useful in the very young and old (short operative time), high risk patients (simple surgery), inflammatory bowel disease (no small bowel manipulation) or if access to the remaining stomach is required (intestinal continuity remains with access to the remaining stomach) [3]. It is contraindicated in few patients – previous gastrectomy, severe gastro-oesophageal reflux, Barrett's oesophagus and is unsuitable for patients who graze feed [3].

There are 4 operating stages for performing Sleeve Gastrectomy. 1/ Release of the greater curve. Tension is applied to the gastrocolic ligament, which is opened parallel with the stomach beginning at the middle of the greater curve, as it is easier to open the posterior omental cavity at that point. It is then released towards the antrum and then upwards towards the left pillar using a 5 mm Ligasure® (Covidien, USSC, Norwalk, CT). 2/ Exposure of the left pillar. This is the key point in the surgery. It is essential not only to visualise the left pillar but also to release the upper part of the posterior aspect of the fundus from the pillar. The pillar may be approached anteriorly, or posteriorly. 3/ Division of the stomach and checking haemostasis. Stapling is performed with the 36Fr gastric tube in position in the antrum before stapling to avoid stenosis at the angle of the lesser curve. Before each division, the cannula is mobilised to check that it has not been caught in the stapler [4]. Depending on the stapler used, the tissues should be stapled very slowly (EndoGIA, covidien USSC, Norwalk, CT). The correct procedure for the final stapling is to move the stomach which has already been divided upwards and to rotate the stapler to the left in order to clearly see and apply tension to the posterior aspect of the fundus. Once the stapling has been completed, it is important to wait to check that there is no bleeding. 4/ Leak test and extracting the gastrectomy specimen. An air and/or methylene blue test is recommended with the gastric tube positioned in the lower oesophagus and the antrum clamped [5]. The specimen is extracted into a bag through the 15 mm opening [6]. In order to facilitate extraction, a ligature may be placed around the narrowest end of the gastrectomy specimen and cut long, so that its end comes out of the bag.

It is recommended that incisions of the aponeurosis over 10 mm in size should be closed [7].

The number of sleeve gastrectomy procedures being performed is increasing annually and there were more of these operations in France last year than gastric bypass. This is explained by the advantages of the technique which is simpler and quicker, attracts the same tariff, there is no malabsorption, anastomosis or mesenteric operative stage, no foreign body inserted and rarely do patients have any symptoms of 'dumping syndrome'. Additionally there is the possibility of further surgery if the procedure fails and access to the digestive tract for endoscopy remains. The medium-term results are satisfactory with an average excess body weight loss of 55% [8].

The major disadvantage of the procedure is fistula formation. Usually, the site of fistula lies along the staple line but other sites of leakage exist. There is currently no well-defined management protocol for anastomotic leakage. If the patient is hemodynamically stable and the leak is contained or well drained, there is ample evidence to support non-operative management for the majority of cases [9]. Endoscopic placement of self-expandable stents has in fact been shown to minimize the need for surgical revision and improve patient outcomes.

The other disadvantage is that by altering the anatomy of the cardia gastro-oesophageal reflux is common in up to 20% of patients [10]. The longer-term outcome for sustained weight loss is unknown. However for patients with poor results or complications alternative surgical procedures including resleeving, gastric bypass with roux en Y or omega loop, duodenal switch or insertion of sizing ring will need consideration [10].

**Declaration of interest**

None.

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