

## **Executive summary**

### **Laparoscopic adjustable gastric banding for the treatment of obesity (Update and Re-appraisal)**

(Adapted from the report of the Review Group by A. Chapman)

#### **Background**

Morbid obesity presents a serious health issue for western countries, with a rising incidence and a strong association with increased mortality and serious co-morbidities such as diabetes, hyperlipidemia, and cardiovascular disease. Unfortunately, conservative treatment options have proved to be of low effectiveness. Surgical interventions such as vertical banded gastroplasty (stomach stapling), Roux-en-Y gastric bypass, and – more recently – Laparoscopic gastric banding have been developed with the aim of producing more drastic and long-term weight loss. The aim of this systematic review was to assess the safety and efficacy of laparoscopic adjustable gastric banding for the treatment of obesity in comparison to the more established operations of vertical banded gastroplasty and gastric bypass.

#### **Methods**

Electronic databases were systematically searched for references relating to obesity surgery via 1) laparoscopic or Swedish adjustable gastric banding, 2) vertical banded gastroplasty, and 3) gastric bypass.

#### **Results**

Only 6 studies reported comparative results for laparoscopic gastric banding and other surgical procedures. One study reported comparative results for all three surgical procedures, and this study was only of moderate quality. In total, 64 studies were found that reported results for laparoscopic adjustable gastric banding and 57 studies reported results on the comparative procedures. Laparoscopic adjustable gastric banding was associated with a mean short term mortality rate of around 0.05% and an overall median morbidity rate of around 11.3%, compared with 0.50% and 23.6% for gastric bypass and 0.31% and 25.7% for vertical banded gastroplasty. In terms of weight loss, the comparative studies suggested that gastric bypass produced superior weight loss outcomes than either of the other two procedures, at least up to 2 years. Beyond 2 years gastric bypass continued to result in superior weight loss outcomes when compared to vertical banded gastroplasty. There was insufficient evidence to determine the relative merits in terms of weight loss of gastric banding and gastric bypass. Overall, all three procedures produced considerable weight loss in patients up to 4 years in the case of laparoscopic adjustable gastric banding (the maximum follow up available at the time of the review), and over 10 years in the case of the comparator procedures.

#### **Conclusion and recommendations**

On the basis of the evidence presented in this systematic review, The ASERNIP-S Review Group agreed on the following classifications and recommendations concerning the safety and efficacy of laparoscopic adjustable gastric banding.

## **ASERNIP-S classification**

*Evidence rating* – Average (up to 4 years of follow-up).

*Safety* - Laparoscopic gastric banding is safer than vertical banded gastroplasty and Roux-en-Y gastric bypass, in terms of short-term mortality rates.

*Efficacy* - Laparoscopic gastric banding is effective, at least up to 4 years, as are the comparator procedures. Up to 2 years the laparoscopic gastric band results in less weight loss than Roux-en-Y gastric bypass; from 2 – 4 years there is insufficient evidence to conclude that Roux-en-Y remains more effective than laparoscopic gastric banding.

## **ASERNIP-S recommendations**

The ASERNIP-S Review Group concluded that the evidence base was of average quality up to 4 years for laparoscopic adjustable gastric banding. Laparoscopic gastric banding is safer than vertical banded gastroplasty and Roux-en-Y gastric bypass, in terms of short-term mortality rates. Laparoscopic gastric banding is effective, at least up to 4 years, as are the comparator procedures. Up to 2 years the laparoscopic gastric band results in less weight loss than Roux-en-Y gastric bypass; from 2 – 4 years there is insufficient evidence to conclude that Roux-en-Y remains more effective than laparoscopic gastric banding. Long-term efficacy of laparoscopic gastric banding remains unproven and further evaluation by randomised controlled trials is recommended to define its merits relative to the comparator procedures.

## **Review Group Membership**

A Chapman	G Kiroff
P Game	B Foster
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**Important note**      The information contained in this report is a distillation of the best available evidence located at the time the searches were completed as stated in the protocol. Please consult with your medical practitioner if you have further questions relating to the information provided, as the clinical context may vary from patient to patient.

## **For further information about ASERNIP-S**

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