

## **Efficacy and safety of transit bipartition procedures: systematic review & meta-analysis**

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### **Background/Introduction:**

Following the profound malabsorption resulting from the initial metabolic bypass procedures of the 1990s/2000s, Santoro et al designed a transit bipartition procedure (cTB) to avoid foregut exclusion. This aimed to reduce the risk of malabsorption, enhance neuroendocrine stimulation whilst retaining all the benefits of maintaining foregut access. Since then, there have been two iterations of sleeve with transit bipartition procedures, single anastomosis sleeve-ileal bypass (SASI) and single anastomosis sleeve-jejunal bypass (SASJ).

### **Objectives:**

Perform the first known systematic review and meta-analysis of sleeve with transit bipartition procedures (TBP).

### **Methods:**

Systematic review using Pubmed, Scopus, Web of Science, Cochrane and Google Scholar from 2010-2023 was performed in 2023. Selection criteria includes Series with  $\geq 10$  patients,  $\geq 6$  months follow up studies involving cTB, SASI or SASJ tx obesity, -related comorbidity as primary or revisional surgery, containing 1/more primary end points: weight loss, comorbidity measurements or perioperative features/complications (nutritional deficiencies).

### **Results:**

45 patient cohorts who underwent TBP from 43 publications. Total number of patients undergoing surgery: 7335 patients. 6253 TBP procedures were analysed. 18 comparative publications; TBP vs other bariatric procedure/s with the other metabolic procedures in comparison studies involving 1082. Median follow up from all studies was 12 months. Demographic results: Gender: 66.4% Females; Median Age: 41.2; Median Baseline BMI: 43.6.

Median Baseline Co-morbidities:

Diabetes: 55%

HTN: 32.2%

Dyslipidaemia: 34.9%

OSA: 14.2%

GORD: 13%

Total weight loss (TWL) and excess weight loss (EWL) were 36.2 and 79.9%, respectively. BMI change over follow-up was 14.3 kg/m<sup>2</sup>. Remission of diabetes was 85% at 12 months ( $p < 0.01$ ). Incidence of malnutrition and/or early bypass reversal was 56%.

**Conclusion:**

TBP are efficacious for weight loss & comorbidity resolution especially diabetes, more so than other commonly utilised bypasses with regards to roux-en-y gastric bypass and one anastomosis bypass. Additionally, its simplicity in construction, easy of reversibility and ability to maintaining access to pylorus, duodenum, ampulla are all appealing factors. However, median follow up is relatively short term and this longer term and more comprehensive studies are needed to clarify it long-term efficacy and safety.