Incisional Hernia and Bariatric surgery

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Is there a Gold standard?

- Currently there is no consensus on management of ventral hernias encountered during bariatric surgery.
Incidence

Ventral hernias are commonly encountered among the obese patients, and they have been identified in up to 8% of patients undergoing gastric bypass.
Contributory factors include persistently high intra-abdominal pressures (IAP) secondary to visceral fat,
previous histories of abdominal surgeries
suboptimal fascial approximation,
defects in fascial structure
reduced healing tendency
Current literature is divided based on whether to perform ventral hernia repair (VHR) concomitantly with BS or at a later stage after optimal weight loss.

- Longer operative time
- Complexity of combined procedures
- Risk of mesh infection
Staged repair

- lower risk of recurrence after weight loss,
- Less technically challenging procedure
- Lower periop morbidity due to resolution of comorbidities such as Diabetes
- Risk of bowel obstruction
- Can be combined with abdominoplasty

Simultaneous BS and VHR may be more efficient,

- lesser physiologic and economic impact when compared to separate procedures and hospital admissions

Immune dysfunction

- there is a growing evidence of immune dysfunction in morbidly obese individuals, and increased rates of mesh infection have been reported in these patients

Adhesiolysis

- Adhesiolysis is also thought to play a role in the high incidence of bowel obstruction, which is likely secondary to recently dissected tissue which may promote the development of adhesions.

- Leaving the hernia contents as a mechanical “plug” covering the defect during BS.
Unplugging the contents

- reducing hernia contents may be necessary for completion of bariatric procedures, particularly gastric bypass
- Omental plication in sleeve gastrectomy
Concomitant Repair

- In a recent retrospective study, Datta and colleagues compared deferring hernia repair treatment with a prosthetic mesh placement during a concomitant LRYGB and showed that mesh use reduced the recurrence rates drastically without any incidence of mesh infection.

Mesh repairs are not contraindicated in clean-contaminated surgeries

- The incidence of hernia recurrence in both primary (31%) and mesh (31.3%) repair groups was similar at 3 years postoperatively.

- Patients with mesh repair had lower hernia recurrence rates at 30-day and 1-year follow-up when compared to patients who underwent primary repair.
Laparoscopic incisional hernia repair has been demonstrated to be safe and feasible in morbidly obese patients.

- Mesh repair of abdominal wall hernias is accepted as the gold standard with low recurrence rates of 2–7%.
Is mesh a risk in a clean contaminated environment?

- Historically, there has been a reluctance to use mesh for the repair of abdominal wall defects in the presence of open bowel surgery due to reports of high infection rates and associated morbidity.

- Recently, some studies have demonstrated that placement of permanent mesh in clean-contaminated and even contaminated operative fields can be performed with minimal wound-related morbidity.

Advantage of simultaneous repair

- Simultaneous abdominal wall hernia repair and bariatric surgical procedures reduce the need for an additional hospital admission and requirement for anaesthesia.

- Lack of consensus in the literature regarding the safety and efficacy of the use of permanent mesh in these circumstances.
The post-operative morbidity associated with delayed hernia repair is significant

- up to 33% of patients developing small bowel obstructions in one study.

Suture or Mesh

- Primary closure with suturing alone has been shown to have increased rates of recurrent compared with the gold standard of mesh repair.

My Experience and painful moments

- 24 recorded cases
- Mean Age 49 (27-67)
- Sex 72%F 28%M
- Mean BMI 42 (33-65)
- One in 5 Diabetic
- 3 bypasses, 3 Bands, rest Sleeve Gastrectomies
Postponing the repair

- The argument for postponing the hernia repair until after BS and sufficient weight loss has occurred lies in the tendency for poorer results for VHR in the obese population.

- Raftopoulos and co-workers describe their experience with VHR in the obese (BMI >35 kg/m²), reporting a 25.9 % complication rate and 18.5 % recurrence rate (in a relatively short follow-up time of 15 months). In their cohort, almost half (48 %) underwent concomitant VHR and LRYGB.
Hernias with small necks

- A recent review article suggests that concomitant BS and VHR should be employed if hernia reduction was performed or in hernias with a small neck

Simultaneous repair

- It is now my practice to repair ventral hernias at the time of BS in cases of symptomatic hernias, empty hernia defects, and those with contents that have to be reduced to complete the procedure.

- I find that concomitant BS and VHR is safe, beneficial for the patient, and does not interfere with the outcome of the original BS
Added operating time

- Mean added time 21 min (range 11-54)
- No difference in LOS
- No conversion to open
- One case of Hybrid closure of defect
- Three seromas (1 radiologic drainage)
- No mesh infections
Identifying the contents
Small bowel in Sac needs sharp dissection

- Avoiding Energy sources around small bowel
- If you unplug the Hole you should close it
- Omentum has a protective role against Incarceration
- Only dissect Omentum out if you are planning to repair the Defect
Closure of the Defect
Minimising spillage during resection
Trimming the sleeve down to a Fr 34
Keeping operating field clean
Leaving mesh insertion till last
When Defect wasn’t closed

• One case of small bowel strangulation needing resection Day 2 post sleeve

• One case of Viable Incarceration 3 months post Sleeve (another surgeon’s) managed with mesh repair

• One case of Small bowel thermal injury Day 3 post RYGB with a Large incisional hernia, needed repair and closure of Defect
Simultaneous laparoscopic abdominal wall hernia repair during bariatric surgical procedures can be performed with acceptable outcomes.

- Addition of the hernia repair at the end of the procedure was felt to add very little to the operative duration.
- LOS observed in our repaired group was also comparable to the reported stand-alone bariatric procedures;
The Repair of Incisional Hernia Following Roux-en-Y Gastric Bypass--With or Without Concomitant Abdomenoplasty?

- The simultaneous abdomenoplasty does not prolong the time of hospital stay of the patients undergoing incisional hernia repair

Conclusion

- There are no clear guidelines as to whether repair should be done simultaneously or delayed.
- With up to 33% of patients developing small bowel obstructions in one study.
- Primary closure with suturing alone has been shown to have increased rates of recurrent compared with the gold standard of mesh repair.
Thank You