

Challenges in managing Abdominal wall hernia with Obesity

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BACKGROUND

An increased risk of hernia in obese patients has been reported in many studies. Morbidly obese patients have more likely to have recurrence than non-obese, the reason could be –

- Higher intraabdominal pressure
- Increase risk of SSI & SSO
- Higher rate of associated co-morbid conditions & complication
- Technical challenge of surgery
- Excessive adipose tissue with poor vascularity
- Large potential subcutaneous tissue

Factors in determining operative approach to morbidly obese patients to hernia

- BMI
- Absolute Diameter of defect
- Surface area of defect compared to surface area of abdominal wall
- Body morphology of the patient (Android/Gynecoid/Ovoid)
- Distribution of fat (Visceral vs Subcutaneous)
- Number of previous recurrences/intended technique
- Mesh location/history of contamination
- Choice of Mesh

Material and Methods

Patient characteristics and selective criteria

This retrospective study included morbidly obese patients with **BMI exceeding 37 kg/m²**,

The patients were classified as

morbidly obese (37 –50 kg/m²)

superobese (>50 kg/m²).

Those patients who had no symptoms of hernia and were ready for BS, Staged repair was done, and they were excluded from the study.

Concomitant BS {Sleeve Gastrectomy} and hernia were done in few superobese patients who were convinced for both in one sitting.



Material & Method...

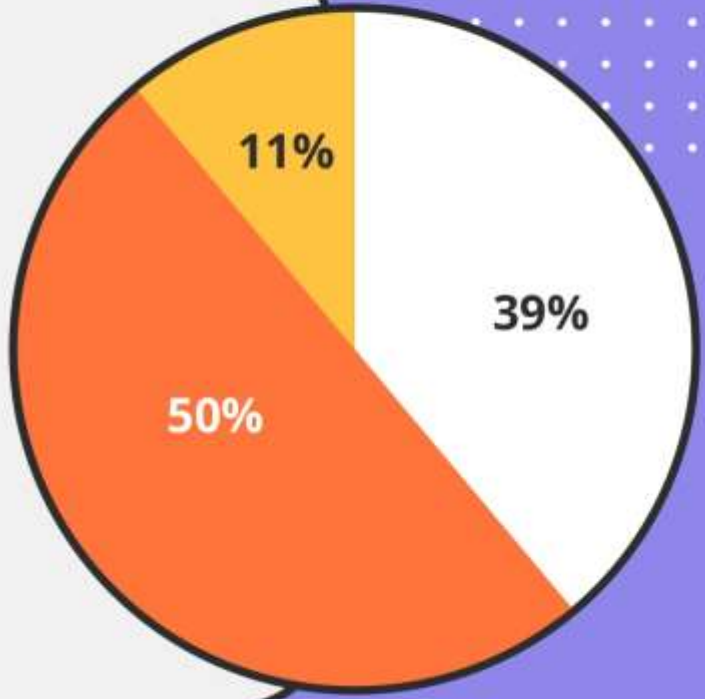
- A total of 36 patients were evaluated in this study who fits into the criteria.
- Hernia recurrence was evaluated by clinical examination every 6 months, and by surveillance computed tomography (CT) scan at 6 months if required. No patient was lost to follow-up evaluation.
- Mean follow up was one and half years and minimum follow up was 6 months

Classification – EHS Classification was used.

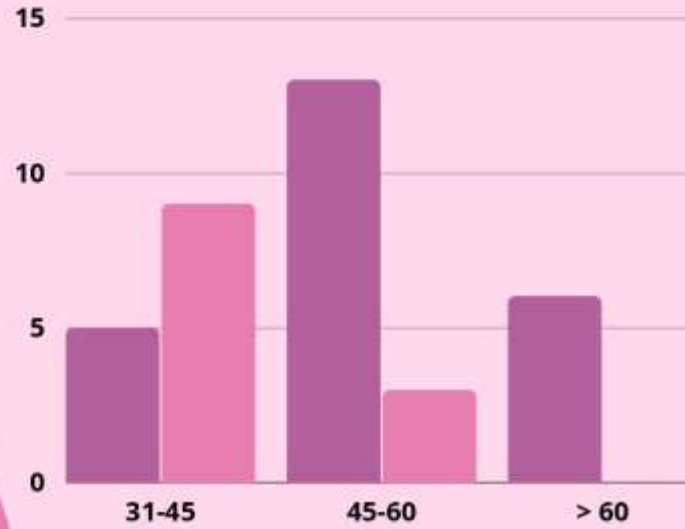
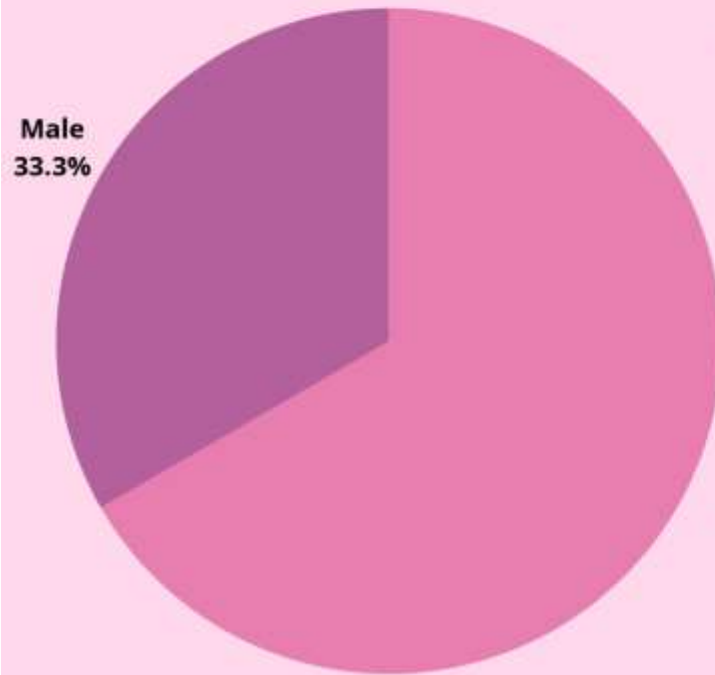
- Primary hernias
- Incisional hernias
- Recurrent incisional hernias.

TYPE OF HERNIA

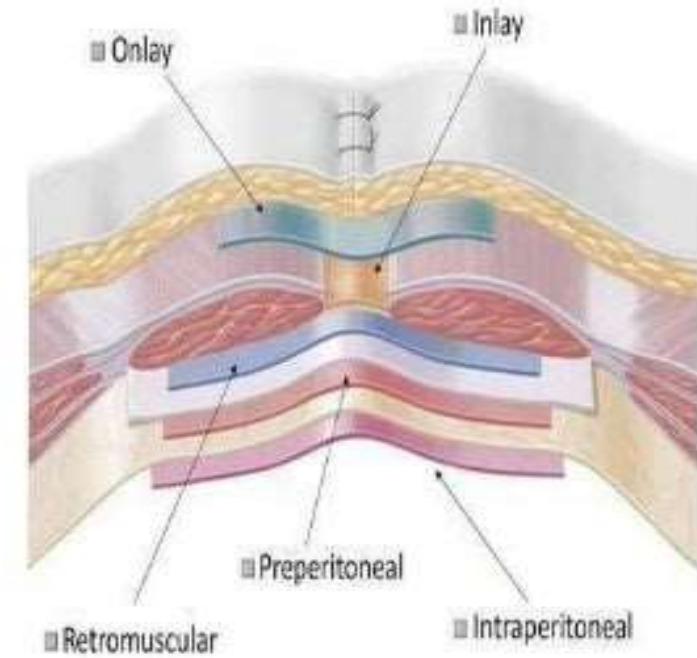
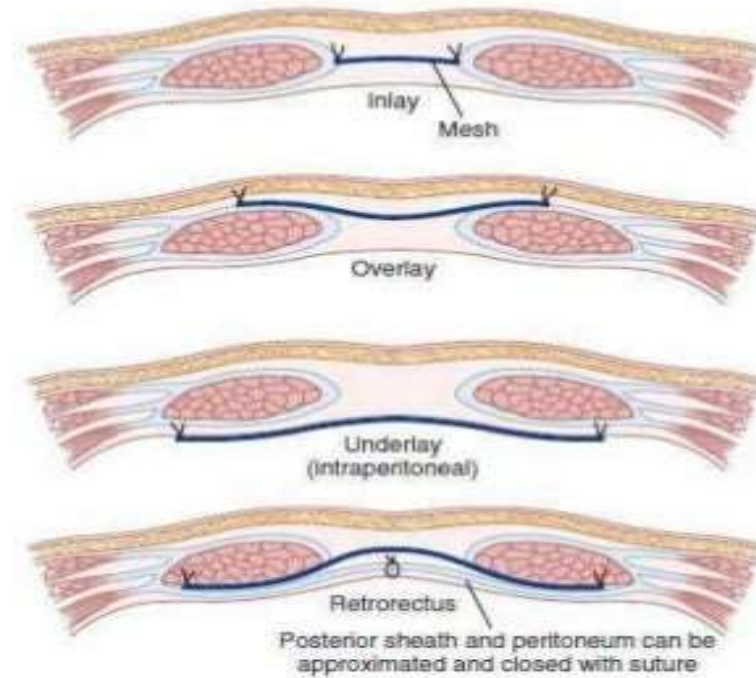
- RECURRENT - 4
- INCISIONAL - 18
- PRIMARY - 14



Gender Chart



Mesh Location



- Meta-analysis by Holihan et al. in 2015
 - sublay placement - lowest risk for recurrence and surgical-site infection

Holihan JL, Nguyen DH, Nguyen MT et al. Mesh location in open ventral hernia repair: A systematic review and network meta-analysis. World J Surg

Operative Procedures used

- Retro-rectus repair - 21

- Laparoscopic eTEP Rives Stoppa
- Laparoscopic eTEP Rives Stoppa with TAR (Transversus abdominis release)
- Laparoscopic Trans Abdominal Retro-rectus Repair
- Hybrid Repair (eTEP TAP + OPEN)
- Open component separation (TAR)

- Intra-peritoneal - 10

- Laparoscopic IPOM Plus

- Pre-peritoneal- 3

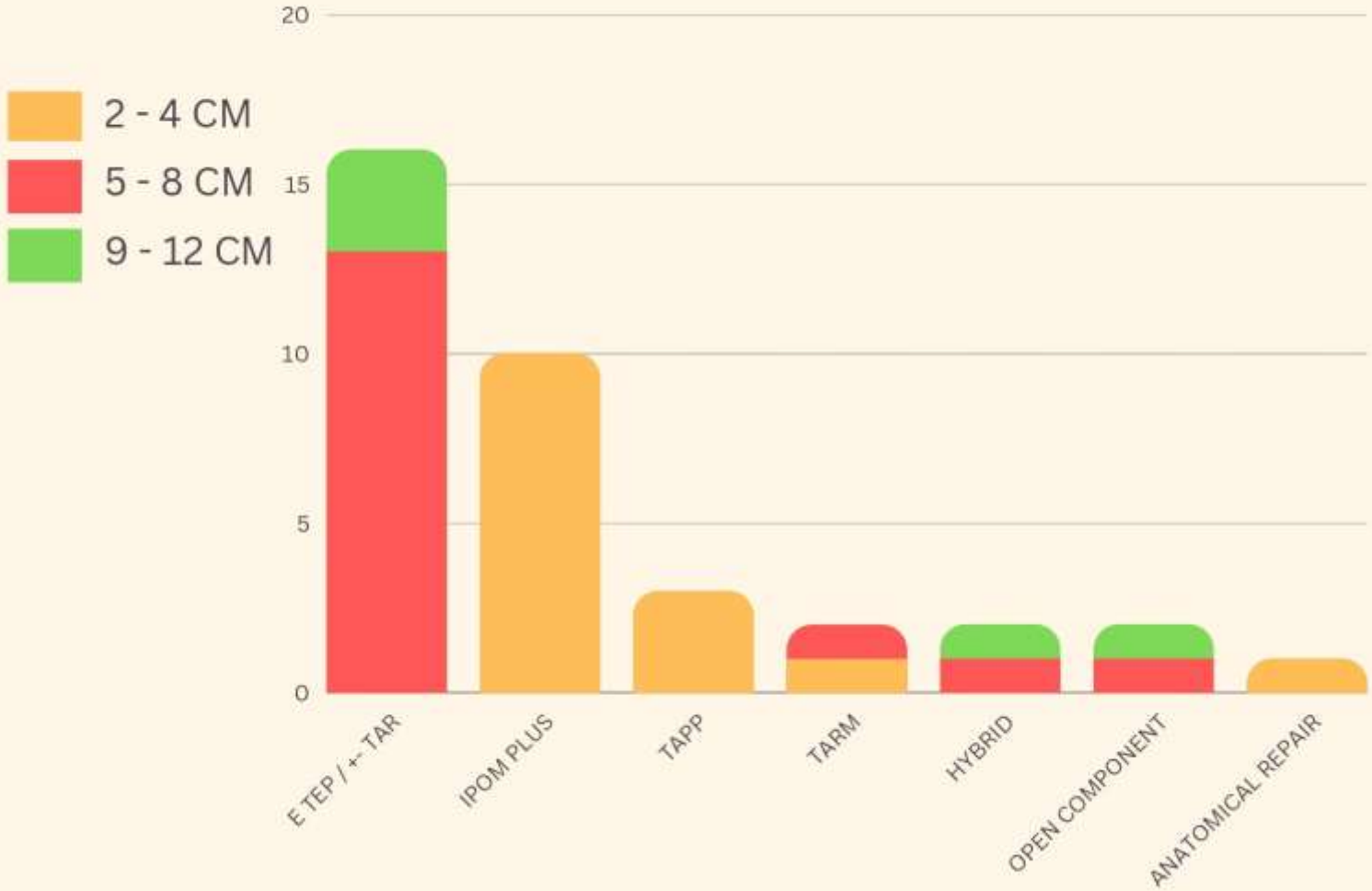
- Laparoscopic Transabdominal Preperitoneal (TAPP)

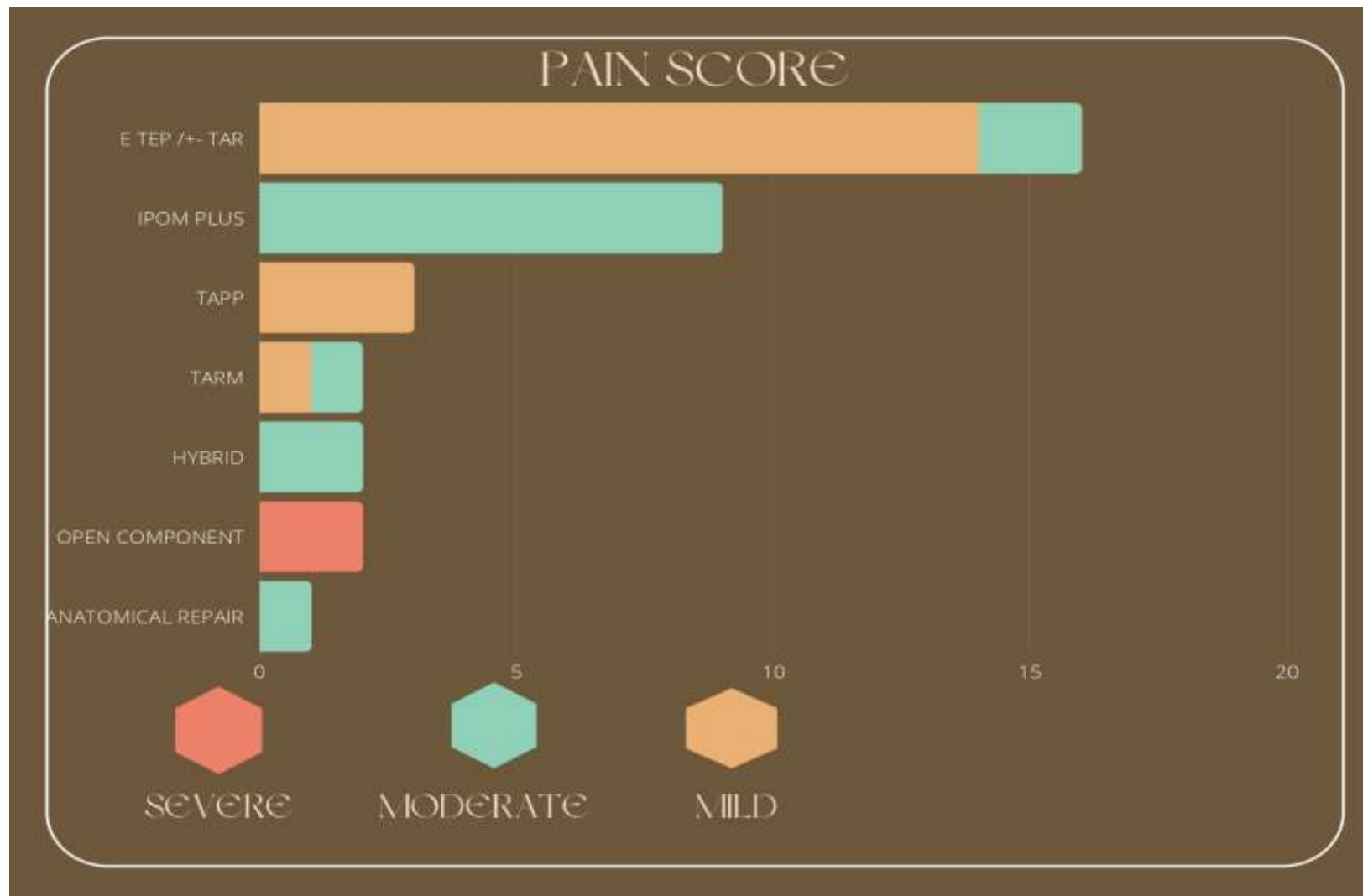
HERNIA PROCEDURES



- Laparoscopic eTEP Rives Stoppa- 8
- Laparoscopic eTEP Rives Stoppa with TAR (Transversus abdominis release)- 8
- Laparoscopic IPOM Plus- 10
- Laparoscopic Trans Abdominal Retrorectus Repair - 2
- Laparoscopic Transabdominal Preperitoneal (TAPP) - 3
- Hybrid Repair (eTEP TAP + OPEN)- 2
- Open component separation (TAR)- 1

DEFECT WIDTH VS PROCEDURES





Evaluated intraoperative cultures in patients undergoing bariatric surgery and found the positive culture rate following

- Sleeve gastrectomy to be zero;
- The positive culture rate was 15% in patients undergoing Roux-en-Y gastric bypass .

Cozacov Y, Szomstein S, Safdie FM, Lo Menzo E, Rosenthal R. Is the use of prosthetic mesh recommended in severely obese patients undergoing concomitant abdominal wall hernia repair and sleeve gastrectomy? J Am Coll Surg. 2014;218(3):358–62.



E TEP RS + TAR

E TEP RS

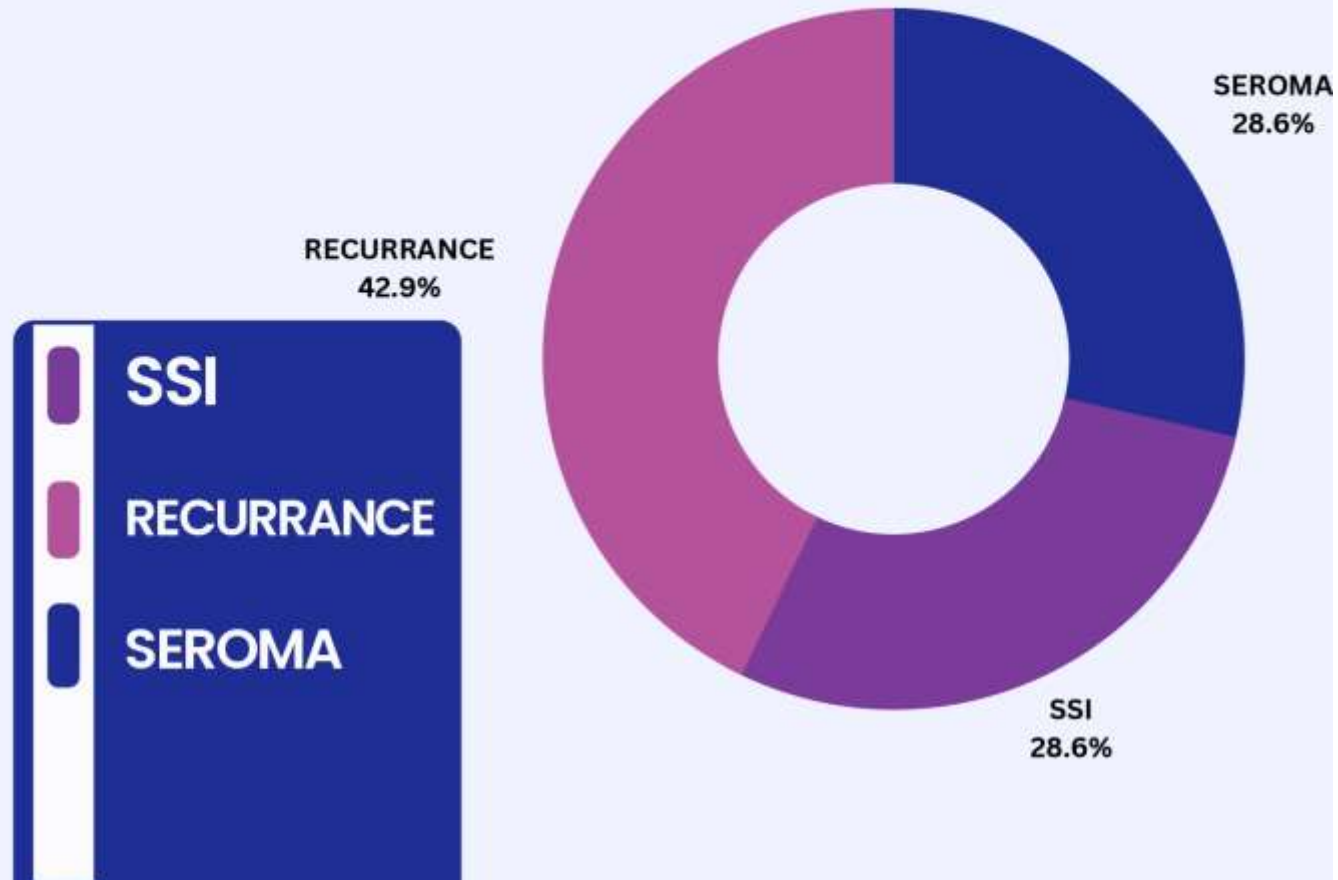


IPOM PLUS

IPOM PLUS



COMPLICATION



COMPLICATIONS

- Recurrences – 3

IPOM – 2

ETEP/TAR – 1

- SSI – 3

VAC Applied – 2

Conservative – 1

- Clinical Seroma – 2

IPOM PLUS-1

ETEP – 1

HYBRID -1

OUTCOME

MIS repair is always better as far as morbidity and outcomes are concerned

Sublay placement of mesh has least recurrence and SSI .

In our series laparoscopic eTEP RS/ TAR is the worked very well for a moderate to large size up to 12 cm ventral hernia in morbidly obese patients because of –

- Minimal pain
- Wide mesh coverage
- Sublay placement of mesh
- Minimal recurrence & SSI

IPOM Plus and TAPP are a good choice in morbidly obese patient for small primary ventral hernia.

Open repairs have more chances of SSI.



CONCLUSION

Managing hernias in obese patients requires a comprehensive and tailored approach that takes into consideration both the hernia itself and the patient's obesity-related challenges.

Successful management begins with thorough preoperative assessment, including evaluating comorbidities and optimizing the patient's overall health status

Careful consideration of the individualized surgical technique and postoperative care is crucial to minimize complications and achieve optimal outcomes.

More studies are needed on this topic



