Repair of recurring perineal hernia in patient with prior coccygectomy

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INTRODUCTION

- Perineal hernias (PHs) often occur following abdominoperineal resections and often are a recurring problem
- Surgical repair approaches include abdominal, perineal, or mixed and involve synthetic or biologic mesh and autologous flaps
- Currently, no tx algorithm available and ambiguous evidence on which choices are optimal[1,2,3]
- Here, we detail a specific approach used in a unique case of recurring PH in patient ("MG", a 70 y.o. white M) with a prior coccygectomy

CASE DESCRIPTION: PATIENT HX

Initial coccygectomy and subsequent hernia (2016)

- MG underwent coccygectomy to tx chronic coccydynia → had post-op incisional breakdown → after healing, developed reducible coccygeal hernia w/ sliding hernia sac likely containing fat

1st hernia repair (2018)

- Via perineum, biomesh placed and reinforced with L superior partial gluteus rotational muscle flap; L buttock rotational fasiocutaneous flap for closure

Hernia recurrence and revision surgery (2019)

- Hernia recurrence 9 months post-op
- Revision surgery performed: synthetic mesh placed via perineum; previous partial gluteus muscle flap and L buttock skin readvanced to cover

2nd hernia recurrence (2021-2023)

- 2 months post-op, MG experienced return of coccydynia and new chronic neuropathic pain near incision site
- In 2021, during tx of this pain, CT showed recurrence of fat containing hernia
- By 2022, MG reported bulge in sacral and perineal area and sensation of painful rectal compression upon sitting → CT at this time showed soft tissue compression of distal rectal segment and defect in pelvic floor
- Bulge continued enlarging/causing pain → in 2023, CT showed significant bowel entrapment within hernia which at this point was difficult to reduce

CASE DESCRIPTION CONT: OUR APPROACH

2nd revision (2023)

- First, intra-abdominal robotic laparoscopic portion:
  - Accessed presacral avascular space → dissection all the way to pelvic floor posteriorly → herniating rectum found and adhesiolysis performed between mesorectum and hernia sac
- Next, open perineal portion:
  - Muscle covering hernia bulge at coccygeal area appreciated (Figure 1) → dissection to free muscle → hernia sac exposed and incised → peeling off of entrapped bowel → bowel pushed into intra-abdominal cavity, then
  - 5x5 cm hernia (Figure 2) was repaired with 8x8 cm Phasix mesh secured with interrupted sutures in parachute fashion (Figure 3) → hernia sac used to cover mesh, but bulge was still present, so decision made to reinforce w/ 2nd mesh (Strattice) on top of sac
  - Partial rotational gluteus muscle flap re-elevated to cover 2nd mesh and previous L buttock skin flap rotated to close

Current state- 1 yr post-op (2024)

- MG has been doing well without hernia recurrence
- Found recently to have slight nonfunctional dehiscence of medial muscle flap attachment with no compromise of skin or mesh which developed few months ago; he will pursue surgical repair of this

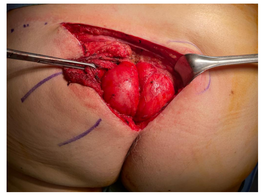


Figure 1. Hernia at coccygeal area.

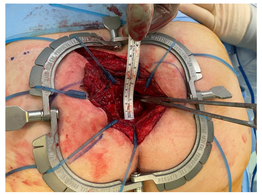


Figure 2. Hernia defect measuring 5x5 cm.

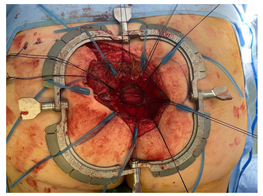


Figure 3. Mesh covering hernia defect.

DISCUSSION

- Perineal only approach was not successful in MG
- Combined abdominal/perineal approach may have led to permanent repair
- Both biologic and synthetic mesh repairs failed in MG
- Mesh type may be unrelated to recurrence
- Usage of >1 meshes may be necessary
- Rotational flaps were used in all 3 interventions; flap type may be unrelated to recurrence
- This case corroborates risk factors for PHs: perineal wound infection[3] and coccygectomy[4] both seen in MG

CONCLUSION

- This case follows MG, a now 71 y.o. white MG, who presented due to recurring PHs after coccygectomy. Our repair which involved a dual abdominal-perineal approach as well as placement of 2 meshes appears to have given MG lasting relief.
- More data is needed to confirm the best approach in repair of PHs.

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