Robotic Repair With Dual-layer Trans-fascial Closure and Intra-peritoneal Onlay Mesh Placement for Large Paramedian Incisional Hernias After Renal Transplant

A Mitsakos, MD; F Brea, MD; DB Leeser, MD; H Pournik, MD

INTRODUCTION

- Plethora of modern techniques in the operative management of complex abdominal wall reconstruction for post-operative incisional ventral hernias in high-risk patients with large defects
- *Renal transplant patients*
  - ✓ Previous operations
  - ✓ Immunosuppression
  - ✓ Diabetes mellitus
  - ✓ Obesity
  - ✓ Old age
- *Primary aim of this study*:
  - ✓ Description of a new technique for robotic incisional hernia repair after renal transplant

METHODS AND PROCEDURES

- Retrospective chart review
- 2 patients with history of renal transplant via paramedian "hockey-stick" incision at the right lower quadrant
- On chronic 3-medication immunosuppression
- Defect size > 20cm x 10cm

RESULTS

- No acute intra-operative complications
- Discharge home on post-operative day 1
- No hernia recurrence, surgical site infection, or other complication on 4-week follow-up

DESCRIPTION OF OPERATIVE TECHNIQUE

- Robotic port placement x3 inferiorly to the left costal margin and x1 at the left anterior superior iliac spine
- Reduction of hernia contents and sac
- Primary closure of fascial defect to approximate oblique and rectus muscles with trans-fascial simple interrupted #1 polypropylene sutures brought out through the skin (Figure 1)
- Sutures tied after release of insufflation to decrease tissue tension
- Internal reinforcement of fascial closure with #0 non-absorbable V-lock running suture (Figure 2)
- Composite mesh placement large enough to cover initial fascial defect before primary closure in an intra-peritoneal onlay fashion (IPOM) (Figure 3)
- Anchoring of the mesh on the abdominal wall fascia with robotic suturing in a running fashion with a #2-0 absorbable V-lock suture

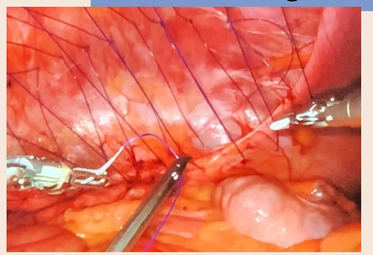


Figure 1

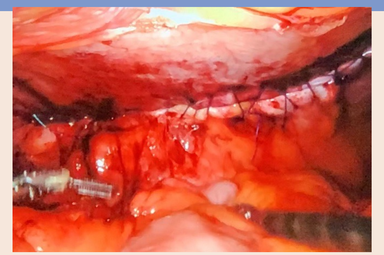


Figure 2

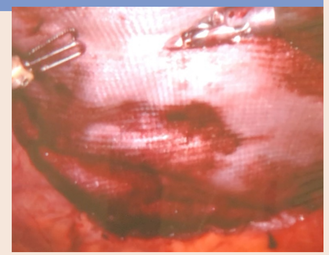


Figure 3

CONCLUSIONS

- **In high-risk renal transplant patients with complex large paramedian incisional hernias, robotic repair in a dual-layer fascial closure (trans-fascial with additional intra-peritoneal reinforcement) with IPOM placement is a new technique with promising results that could minimize complication rates in an already immunocompromised patient population.**