Reliable Complex Abdominal Wall Hernia Repairs with a Narrow Well-Fixed Retrorectus Polypropylene Mesh: A Review of over 100 Consecutive Cases

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Introduction: No consensus exists on the optimal technique for repair of complex ventral hernias.Current trends emphasize large meshes with wide overlaps and minimal suture fixation, though reported complications and recurrence remains problematic.[1,2,3] The purpose of our study is to determine outcomes for complex ventral hernia repairs in a large cohort of patients utilizing a surgical construct employing retrorectus placement of a narrow, macroporous polypropylene mesh with up to 45 suture fixation points for force distribution.

Materials and Methods: A retrospective review was performed for all patients undergoing ventral hernia repair with retrorectus placement of midweight, uncoated, soft polypropylene mesh by a single surgeon (G.A.D.) between the years of 2010 and 2015. Patient characteristics, surgical history, operative data, and postoperative course were reviewed. Patients were administered a validated survey of pain and function (PROMIS).[4]

Results: A total of 101 patients underwent hernia repair, with a mean age of 56 years and a mean BMI of 29 m/kg^2(range 18-51 m/kg^2). Patients had a median of 3 prior abdominal operations (range: 0-9), with 44 patients presenting with recurrent hernias. 42 patients were VHWG grade 1, 40 grade 2, 17 grade 3, and 2 grade 4. There were no recurrences at a mean follow up of 14.2 months (range 5 days to 4.5 years). The SSO rate was 7.9% (3 SSIs, 2 seromas, 2 hematomas, and 4 instances of delayed wound healing in 8 patients). 1 patient required reoperation for hematoma drainage. 5 patients required readmission within 30 days. Postop patients showed PROMIS pain interference, intensity, and behavior scores below that of the general population, and global physical and mental health scores on par with that of the general population.

Conclusion: A surgical construct employing a retrorectus placement of a narrow macroporous polypropylene mesh with up to 45 suture fixation points for force distribution can achieve significantly better outcomes across a spectrum of VHWG grade risk-stratified patients compared to current strategies that employ wide meshes with minimal fixation.

Reference Citations:
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