Long-term Clinical and Radiological Evaluation of patients undergoing ventral hernia repair with plication of diastasis of the rectus abdominus Muscles

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BACKGROUND

The management of ventral hernias with associated diastasis of the rectus abdominus muscles is a topic of debate. There is an association with higher recurrence rates after ventral hernia repairs (VHR) in the presence of diastasis recti (DR). Mesh based repair is recommended by most experts and international societies however the value of VHR+DR is not well understood. Here we present a long-term radiological and clinical follow for patients undergoing VHR+DR.

METHODOLOGY

Retrospective Review of prospectively collected data of patients >18 years of age who underwent a VHR+DR with post operative imaging and clinical follow up. Post operative computed tomography scans were independently reviewed to evaluate for hernia recurrence and or recurrence of diastasis.

Patients included had primary or incisional ventral hernias, with single or multiple defects less than 4 cm in size.

Hernia specific variables, operative details, and outcomes measures were independently extracted for analysis.

Sex	N (%)
Male	13(62.9)
Female	22 (37.1)
Mean Age (Range)	47.71 ± 11,58
Mean BMI (Kg/m2)	30.13 ± 4,9
Mean BMI (Range)	20-37
ASA Class (%)	
I	4 (11.4)
II	20 (57.1)
III	11 (31.4)

Procedure	N (%)
ETEP	18(51.4)
SCOLA	6 (17.1)
IPUM	4 (11.4)
TARUP	2 (5.7)
LIRA	2 (5.7)
TAPP	1 (2.9)
STAPLED	1 (2.9)
Open	1 (2.9)
Mean Defect Width (cm)	4.636 ± 1.48
Mean Defect Length (cm)	2.2 ± 2.08
Mean Diastasis Width (cm)	4.636 ± 1.48
Mean radiological follow up (days)	614
Radiological Hernia Recurrence (%)	2.9
Radiological Diastasis Recurrence (%)	17.1

RESULTS

35 patients were evaluated. The mean age was 47.71 predominantly female. Mean BMI was 30.13. Patients were predominantly ASA class 2 and 3. 60% of patients had postoperative radiological follow up, with a median number of days between surgery and radiological follow up of 614 days, with a mean clinical follow-up of 783 days. The mean hernia width was 2.4 cm, with a mean width and length of the diastasis of 4 and 9.8 cm, respectively. The techniques implemented included ETEP (51.4%), SCOLA (17.1%), LIRA (5.7%), TARUP (5.7%), TAPP (2.9%), IPUM+ (11.4%), Stapled Aponeuroplasty (2.9%) and Open repair (2.9%). A polypropylene macroporous midweight mesh was used in 48.6% of cases, followed by self-gripping mesh in 20.0%. The complication rate was 5.7%, including seromas (2.9%) and posterior rectus sheath dehiscence with intestinal obstruction (2.9%) with a (2.9%) clinical and radiological recurrence. Radiological Diastasis recurrence was observed in (17.1%) of cases.

CONCLUSIONS

VHR+DR is safe. DR recurrence was significantly higher than hernia recurrences despite mesh reinforcement. Further studies, to evaluate the impact of diastasis repair in hernia recurrences are necessary to determine causality vs. association regarding hernia recurrence in the setting of a concomitant diastasis.