

VAGINAL ENTEROCELE REPAIR WITH AND WITHOUT BOVINE PERICARDIUM REINFORCEMENT

Hypothesis / aims of study

To determine whether vaginal enterocele repair with bovine pericardium augmentation for deficient rectovaginal fascia results in improved surgical outcomes.

Study design, materials and methods

We performed a retrospective case-control study comparing patients who underwent vaginal posterior enterocele repair using a non-crosslinked bovine pericardium graft (Veritas®, Synovis Surgical Innovations, Minneapolis, MN) due to clinically identified poor fascial quality (group I) to a matched control group of patients who had traditional vaginal posterior enterocele repair without graft (group II). The groups were matched in a 2:1 ratio based on age, BMI, and preoperative POP-Q examination (points Ap, Bp, and TVL). We excluded patients with follow-up less than 6 months. Posterior wall recurrence was defined as POP-Q values of Ap or Bp \geq -1. Statistical analysis was performed using the unpaired t-test, Wilcoxon rank sums test, Chi-squared/Fisher's exact and binary logistic regression.

Results

From 2004-2009, 130 patients underwent enterocele repair using bovine pericardium, 77 of these had sufficient follow-up and were included in the analysis. 154 posterior enterocele repairs without graft were then matched based on the above criteria. Mean patient age was 62.1 \pm 11.2 (group I) and 59.7 \pm 11.3 (group II). Median follow-up was 56 weeks (41-105) and 57 weeks (32.8-94) ($p=0.4$). 13 patients in group I had a previous posterior repair and 11 patients in group II ($p<0.02$). There were no differences in preoperative functional characteristics including sexual activity, dyspareunia, and bowel complaints.

Table I: Mean POP-Q measurements

	Preoperative POP-Q			Postoperative POP-Q		
	Group I n=77	Group II n=154	<i>p</i> -value	Group I n=77	Group II n=154	<i>p</i> -value
Aa	-0.33	-0.58	<i>ns</i>	-2.45	-2.63	<i>ns</i>
Ba	-0.74	-0.37	<i>ns</i>	-2.49	-2.56	<i>ns</i>
Ap	-0.18	0.17	<i>ns</i>	-2.66	-2.90	<i>p<0.0001</i>
Bp	0.31	0.25	<i>ns</i>	-2.68	-2.82	<i>p<0.002</i>
C	-4.76	-4.88	<i>ns</i>	-7.71	-7.81	<i>ns</i>
Tvl	9.82	9.59	<i>ns</i>	8.66	8.61	<i>ns</i>
Gh	3.01	2.87	<i>ns</i>	1.84	1.99	<i>ns</i>
Pb	3.15	3.09	<i>ns</i>	3.78	3.58	<i>ns</i>

Posterior wall recurrence was found in 6.5%(5/77) of patients in group I and 1.3%(2/154) of patients in group II ($p<0.02$). Previous posterior repair was not a significant risk factor for recurrence. Postoperative complaints of dyspareunia and bowel dysfunction were not statistically different between groups ($p=1$, $p=0.4$). There was no difference in granulation tissue at 12 weeks ($p=0.7$). There were no erosions or surgical interventions for graft related complications. Overall patient satisfaction (self report of "cured/greatly improved") was 67.5% in group I and 74% in group II ($p=0.18$).

Interpretation of results

Significant differences in postoperative posterior wall POP-Q values (all stage II) must be recognized within the context that graft was implanted exclusively in patients with inherently weakened tissue. There were no healing abnormalities or differences in functional outcomes including sexual function and bowel symptoms observed between groups.

Concluding message

Bovine pericardium augmentation may represent an adequate substitute for deficient fascia in vaginal enterocele repair. No healing abnormalities or functional side effects were identified.

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Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	Cleveland Clinic Florida Institutional Review Board
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes