

## **BOVINE PERICARDIUM AUGMENTATION GRAFT FOR VAGINAL PARAVAGINAL DEFECT REPAIR OF THE ANTERIOR SEGMENT**

### **Hypothesis / aims of study**

Recurrence risk and reoperation rates for prolapse are reported as high as 25%. In an effort to decrease this, the use of allograft materials has been recently reported, however success rates after 3 months appear no better than standard repairs. The objective of this study was to assess the efficacy of bovine pericardium as an augmentation graft for anterior segment reconstruction.

### **Study design, materials and methods**

Between 1/2002 and 3/2003 all patients undergoing vaginal paravaginal defect repair had a bovine pericardium interposition graft placed. After the sp. Retzius was entered, the midline fascial defect was closed with interrupted absorbable sutures. A rectangular piece of bovine pericardium was attached by a series of braided polyester sutures to the arcus tendineus bilaterally. Additional surgeries were completed as needed. Patients were assessed at 6 weeks, 3 and 6 months then yearly. Pre and post-operative POPQ measurements were compared. Healing, vaginal skin integrity and complications were noted. Groups were compared using independent t-tests.

### **Results**

61 pts. received bovine pericardium augmentation. The demographics are as follows: Mean age 62 yrs (34-85), parity 3 (0-15), wt 167 lb (109-284), with 54 (88.5%) Caucasian, 5 (8.2%) African-American and 11 (18%) smokers, 10 (16.4%) with chronic respiratory disease, 25 (41%) with chronic constipation, 25 (41%) with previous prolapse surgery, 34 (56%) with prior hysterectomy, and of the 57 eligible, 18 (31%) on HRT. Concomitant surgeries were as follows: vaginal hysterectomy 16; TVT 58; posterior repair 34; enterocele 1; uterosacral suspension 1; sacrospinous ligament fixation 9; sphincteroplasty 1. Preoperatively 3 (4.9%) had ICS stage I; 24 (39.3%) stage II; 23 (37.3%) stage III and 11 (18%) stage IV anterior wall prolapse. At a mean follow-up of 7.25 months (range 2–18 m), 4 (6.5%) had stage II or greater anterior wall prolapse. The mean measurement of the most dependent point of the anterior vaginal wall Ba preoperatively was +1.4 (range –2 to +6) and postoperatively –2.7 (range -3 to +1). If failure is defined as point Ba  $\geq$  0, 1 pt (1.6%) failed and subsequently underwent an anterior colporrhaphy. Three (5%) developed enteroceles, 2 noted at 6 wks and 1 at 18 m. Three (5%) developed posterior wall defects to point 0 at 3m, 5m and 13m respectively. Preoperatively these pts had a point Bp of –2, +3 and +6 respectively. The only significant association with recurrent prolapse of any type was the preoperative point Ba. Those without prolapse noted after surgery had a mean Ba of +1.2 compared to +3.0 for those with recurrent prolapse (p=0.04). There were no cases of graft erosion. The vaginal tissue was supple and normal in appearance by 6 weeks. One pt. developed a vaginal cuff abscess, which spontaneously drained and did not require any graft removal.

### **Interpretation of results**

Bovine pericardium augmentation interposition graft is safe and appears highly successful for anterior segment prolapse repair. Greater stages of prolapse preoperatively predispose to post-operative prolapse denovo or recurrent.

### **Concluding message**

Vaginal paravaginal repair with bovine pericardial augmentation graft is efficacious in the treatment of advanced anterior segment defects in comparison to published rates of prolapse recurrence for the standard anterior repair.