

Posterior Repair with Perforated Porcine Dermal Graft

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ABSTRACT

Objective: To compare postoperative vaginal incision separation and healing in patients undergoing posterior repair with perforated porcine dermal grafts with those that received grafts without perforations. Secondly, the tensile properties of the perforated and non-perforated grafts were measured and compared.

Materials and Methods: This was a non-randomized retrospective cohort analysis of women with stage II or greater rectoceles who underwent posterior repair with perforated and non-perforated porcine dermal grafts (Pelvicol™ CR Bard Covington, GA USA). The incidence of postoperative vaginal incision separation (dehiscence) was compared. A secondary analysis to assess graft tensile strength, suture pull out strength, and flexibility after perforation was performed using standard test method TM 0133 and ASTM bending and resistance protocols.

Results: Seventeen percent of patients (21/127) who received grafts without perforations developed vaginal incision dehiscence compared to 7% (5/71) of patients who received perforated grafts ($p = 0.078$). Four patients with vaginal incision dehiscence with non-perforated grafts required surgical revision to facilitate healing. Neither tensile strength or suture pull out strength were significantly different between perforated and non-perforated grafts ($p = 0.81$, $p = 0.29$, respectively). There was no difference in the flexibility of the two grafts ($p = 0.20$).

Conclusion: Perforated porcine dermal grafts retain their tensile properties and are associated with fewer vaginal incision dehiscences.

Key words: rectal prolapse; female; surgery; graft; porcine

Int Braz J Urol. 2008; 34: 84-90
