

XENOGRAFTS FOR SACROCOLPOPEXY

Graft-related complications in vaginal prolapse repair might in some cases be the result of the host response to the implanted material. Synthetic polypropylene is the most widely used graft polymer, but alternative materials might produce better patient outcomes. Now, two Belgian studies have examined the use of xenogenic grafts in the repair of apical vaginal prolapse. "We concluded that substitution of polypropylene grafts by xenografts did not yield similar objective outcomes, or reduce the number of graft-related complications" says Jan Deprest, corresponding author. "In addition, using xenografts in patients at high risk for graft-related complications did not prevent these events, and was associated with a high anatomical and functional failure rate as well as reoperation rate."

In the first study, the investigators tested the hypothesis that xenografts would offer comparable outcomes to synthetic grafts, but a lower incidence of graft-related complications. They included 150 consecutive patients who underwent laparoscopic sacrocolpopexy for vault or uterine prolapse using either synthetic type I polypropylene meshes ($n=100$) or heterologous porcine grafts ($n=50$; either small intestinal submucosa or dermal collagen).

At a mean follow up of 33 months, the anatomical failure rate was significantly higher in the xenograft group than in those patients who received synthetic grafts, at the level of the vault (21% versus 3%) and posterior compartment (36% versus 19%). Most failures were asymptomatic; only six patients required reoperation for prolapse, all of whom had received xenografts. The incidence of graft-related complications was comparable in the two groups (10% versus 12%), as was the rate of reoperation for complications. Functional outcomes, which included evaluation of urinary, fecal, and sexual symptoms, and quality of life assessment, were equivalent in the two groups.

"Even if functional outcomes are comparable, it seems to us that the routine use of xenografts for this operation is not warranted until further clinical data prove otherwise," observes Deprest. "The ideal 'biological' mesh has not yet been identified."

The researchers' second study focused on 22 patients at high risk of graft-related complications because of pre-existing vaginal ulcerations ($n=4$), concomitant vaginal prolapse repair ($n=15$), total hysterectomy ($n=1$), intraoperative abdominal contamination ($n=1$) or the presence of infection ($n=1$). They underwent the same operation as the patients in the first study, with placement of either small intestinal submucosa or dermal collagen xenograft.

At a mean follow up of 27 months, outcomes were worse than in the xenograft group in the first study. The anatomical cure rate was only 31.5%, with failures at the vault, anterior, and posterior compartments occurring in 31%, 19% and 50% of patients, respectively. Four women developed graft-related complications, two of whom required surgical reintervention; three patients required reoperation for prolapse. The authors conclude that further research is needed into both alternative surgical techniques and improved graft materials to enhance the care of these high-risk patients.

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Original articles Deprest, J. *et al.* Medium term outcome of laparoscopic sacrocolpopexy with xenografts compared to synthetic grafts. *J. Urol.* **182**, 2362-2368 (2009).

Claerhout, F. Sacrocolpopexy using xenogenic acellular collagen in patients at increased risk for graft-related complications. *NeuroUrol. Urodynam.* doi:10.1002/nau.20805