

WEAKENED CADAVERIC FASCIAL SLING: AN UNEXPECTED CAUSE OF FAILURE

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The use of the pubovaginal sling in all types of stress incontinence is becoming increasingly popular due to reportedly good long-term cure rates.¹ We report a case in which the anchoring sutures pulled through a pubovaginal sling constructed from human cadaveric fascia lata.

CASE REPORT

A 48-year-old woman presented with stress urinary incontinence. Neurourological history, physical examination and video urodynamic evaluation confirmed sphincteric incontinence. An uncomplicated pubovaginal sling procedure was performed using donor human allograft (freeze-dried fascia lata). The 14 × 2 cm. sling was anchored using 2-zero polyester sutures on either end with 2 rows of horizontal mattress sutures. The sling was placed as described by McGuire et al.¹

On postoperative day 3 a voiding trial immediately demonstrated recurrent stress incontinence. Pelvic examination revealed that 1 end of the sling protruded from the anterior vaginal incision since the nonabsorbable suture was no longer attached to the sling on that side. There was no purulent discharge or any signs of infection. The sling was grasped and easily removed through the vagina. Examination of the fascia showed frayed edges on each side. It was obvious that the sutures had pulled out on both sides of the graft.

DISCUSSION

Recently we and others have begun to use cadaveric fascia as sling material in select patients, primarily those with multiple medical co-morbidities and difficulty harvesting the fascia because of physical deformity. The benefit of using this tissue is the elimination of abdominal or thigh dissection to harvest the rectus fascia or fascia lata and, hence, decreased patient morbidity. The mostly theoretical disadvantages are the risk of transmissible disease from the donor, graft rejection and unknown long-term results.

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To our knowledge we report the first case of a poor outcome due to the cadaveric fascia used to treat stress incontinence. It is likely that the portion of fascia was structurally weakened in the multiple necessary steps of processing. Examination of the fascia after it was removed revealed that the sutures had pulled through at both ends.

Approximately 150,000 musculoskeletal allografts are used by orthopedic surgeons yearly in the United States.² Despite this popularity there remains concern over the transmission of infectious disease as well as graft rejection. To decrease the likelihood of the transmission of infection tissue banks have instituted stringent criteria to screen prospective donors. In addition, procured tissue is treated in a multistep preventive process, including tissue dehydration and gamma radiation, which inactivates human immunodeficiency virus. This process was developed by the American Association of Tissue Banks in 1984 and it was modified in 1993.³ To our knowledge there have been no reported cases of human immunodeficiency virus, hepatitis or graft rejection to date using allograft tissue when the donor and tissue were subject to these criteria.³

CONCLUSIONS

We believe that the use of allograft material for slings is safe. When cadaveric fascia is used, we recommend testing the tensile strength of the fascia simply by pulling either end with force.

REFERENCES

1. McGuire, E. M., Bennett, C. J., Konnak, J. A., Sonda, L. P. and Savastano, J. A.: Experience with pubovaginal slings for urinary incontinence at the University of Michigan. *J. Urol.*, **138**: 525, 1987.
2. Mowe, J.: Annual Questionnaire of Accredited Tissue Banks. Mclean, Virginia: American Association of Tissue Banks, 1992.
3. The FDA intra-agency guidelines for human tissue intended for transplantation. Food and Drug Administration. *Fed. Reg.*, **58**: 65514, 1993.