ELSEVIER

PETROLEUM JELLY LIPOGRANULOMA OF THE PENIS TREATED WITH EXCISION AND NATIVE SKIN COVERAGE

RICHARD A. SANTUCCI, R. DAVID ZEHRING, AND DALE MCCLURE

ABSTRACT

Penile augmentation by injection of petroleum jelly is still performed by nonmedical practitioners abroad and causes foreign body reactions with resultant scarring, deformity, and ulceration. Surgical treatment involves removal of the foreign material and granuloma, followed by scrotal flaps, inguinal flaps, free flaps, or split-thickness skin grafts. We present the use of native penile skin for coverage after resection of oleogranuloma in the first case of which we are aware. Local penile skin coverage allows for an excellent surgical result, with many potential advantages over flaps or skin grafts. UROLOGY **56:** 331xvii–331xviii, 2000. © 2000, Elsevier Science Inc.

Body contouring by injection of a bulking agent such as paraffin, mineral oil, silicone, or petroleum jelly is still performed by nonmedical practitioners in Asia, Russia, and elsewhere.[1] These injections can cause foreign body reactions, with resultant scarring, deformity, and ulceration.[1–3] The recommended surgical treatment involves removing the foreign material and granuloma, followed by appropriate skin coverage. Coverage is recommended most commonly by scrotal flaps,[1,2] but inguinal flaps,[1] free flaps, or split-thickness skin grafts are also used. We present a case of petroleum jelly oleogranuloma of the penis and propose the use of native penile skin for coverage when possible, an innovation that has not yet been described.

FIGURE 1. *Preoperative image of penile malformation from subcuticular petroleum jelly injection. Note unaffected glans at the superior aspect of the image.*

CASE REPORT

A 23-year-old recent Russian immigrant had undergone subcutaneous injection of petroleum jelly to increase his penile girth approximately 8 months before presentation. The resultant granuloma formation caused woody induration and extreme penile deformity (Fig. 1). Surgical repair was achieved by a circumcising incision. The unsalvageable (extremely thickened) and redundant ventral skin was removed. The remaining dorsal skin was dissected off the corpora cavernosa, being careful to avoid damage to the neurovascular bundle. The dorsal penile skin was then meticulously prepared by removing the underlying granuloma, returning it to its normal thickness while preserving the skin's blood supply (Fig. 2). Next, the dorsal skin flap was wrapped around the penile shaft, trimmed, and reapproximated both distally (circumcising incision) and ventrally (along the course of the urethra).

The postoperative appearance was very good, with minimal residual penile shaft thickening (Fig. 3). His sensation and sexual function were normal.

From the San Francisco General Hospital, San Francisco, California; and Virginia Mason Medical Center, Seattle, Washington

Address for correspondence: Richard A. Santucci, M.D., Department of Urologic Trauma and Reconstruction, San Francisco General Hospital, 1001 Potrero, Room 3A20, San Francisco, CA 94110

Submitted: January 3, 2000, accepted (with revisions): March 24, 2000

0090-4295/00/$20.00
PII S0090-4295(00)00625-7

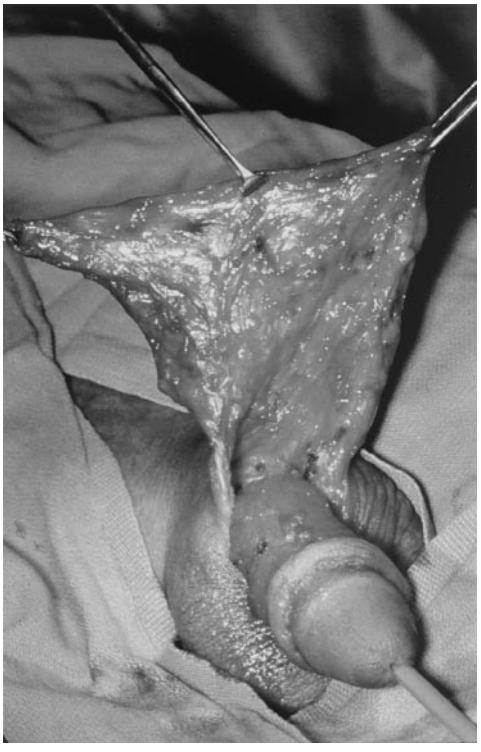

FIGURE 2. *Intraoperative image showing that the ventral skin has been removed, leaving a large dorsal flap. The flap has been dissected from the penis and thinned by removing the subcuticular oleogranuloma.*

COMMENT

The devastating nature of the deformity after penile oleogranuloma has prompted previous investigators to advocate total penile skin removal and coverage with non-penile skin.[1,2] We successfully removed the underlying granuloma from penile skin and used it for coverage, without the need for grafts or distant flaps, in the first published case of which we are aware. This method has many features that seem superior to existing techniques. The penile skin is naturally elastic, has the appropriate color and consistency, is non-hair-bearing, and avoids the need for flap or donor site wounds.

FIGURE 3. *Postoperative view showing cosmetic improvement after penile reconstruction.*

The penile shaft sensation can potentially be maintained with this technique, as it was in our patient. This technique may be limited in patients without sufficient uninvolved skin, if resultant ulceration or induration makes the potential skin flap unusable. Additionally, the dissection of oleogranuloma off the skin flap can be difficult, and sparing of a sufficient blood supply for flap viability may not be possible.

CONCLUSIONS

Practitioners in areas with large immigrant populations might encounter this rare but significant clinical entity. When the inflammatory process spares sufficient penile skin to allow it, this method of penile skin coverage can simplify reconstruction after excision of penile oleogranuloma.

REFERENCES

1. Jeong JH, Shin HJ, Woo SH, *et al:* A new repair technique for penile paraffinoma: bilateral scrotal flaps. Ann Plastic Surg **37**: 386–393, 1996.

2. Engelman ER, Herr HW, and Ravera J: Lipogranulomatosis of external genitalia. Urology **3**: 358–361, 1974.

3. Arduino LJ: Sclerosing lipogranuloma of male genitalia. J Urol **82**: 155–161, 1959.