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BRIEF COMMUNICATION

SURGICAL TREATMENT OF PENILE-SCROTAL LYMPHEDEMA

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Although operative management for peripheral lymphedema is often less than satisfactory (1-4), our surgical experience in 40 patients with penile-scrotal lymphedema followed up to 9 years shows excellent cosmetic outcomes with only rare recurrences after "debulking" using the technique described by Cordeiro and Baracat (5).

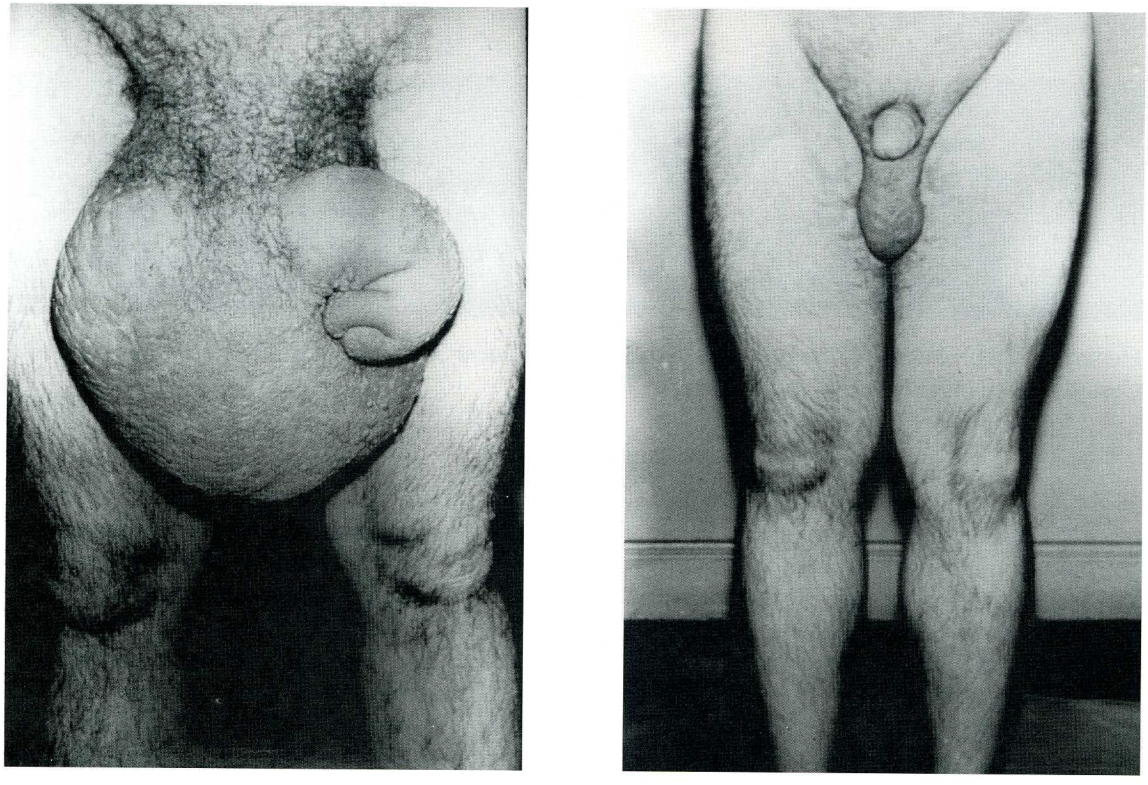
Between 1985-1993, 23 white and 17 black men presented with severe penile-scrotal lymphedema *(Fig. 1)*. Of these 22 patients (55%) had primary lymphedema (chylous or non-chylous reflux) and 18 (45%) had secondary lymphedema (transvesical prostatectomy with radiotherapy for cancer). In 6 patients with reflux syndromes, large lymphatic vesicles seen at the time of operation leaked large quantities of lymph when disrupted. Twelve patients who underwent bipedal or scrotal contrast lymphography demonstrated peripheral lymphatic hypoplasia. In 6 patients with reflux, ligature of the retroperitoneal lumbar lymphatic collectors was performed before genital debulking.

OPERATIVE TECHNIQUE

Key technical features were as follows: 1) an indwelling urinary bladder catheter; 2) outline of incision in the median raphe of the penis and ventral surface of the scrotum to accommodate later Z-plasty; 3) incision of skin and subcutaneous tissue with isolation of the testicles and spermatic cords; 4) development of thin scrotal and penile flaps; 5) excision of redundant skin and underlying subcutis with meticulous hemostasis; 6) testicular biopsy, fixation of the testicles in the revised scrotal sac, and, in the presence of hydrocele, eversion of the tunica vaginalis; 7) appropriate soft tissue drains; 8) reclosure of the scrotum (simple) and penile incision (z-plasty); 9) wearing of a scrotal suspensory; 10) perioperative antibiotics; 11) hospital discharge after 4-5 days.

COMMENT

Using this technique, the overall cosmetic and functional results were excellent. Five patients required additional excision of residual edematous tissue under local anesthesia in the outpatient clinic. Six patients who were unable to engage in sexual intercourse before operation, because either the penis or scrotum precluded erection and/or vaginal penetration, returned to normal sexual activity after operation. Seven patients developed regional infection which quickly resolved with antibiotic drug therapy and hygienic care. Only one patient developed a penile synechia with aberrant scar formation which resolved after a minor procedure under local



FFig. 1. Left—43 year old man with massive scrotal and penile lymphedema. Right—appearance three months after operative "debulking."

analgesia. Nine patients or 12.5% had recurrence of genital swelling over a 9 year follow-up.

In patients with chylous or non-chylous reflux syndromes, 12 or 70.5% had concomitant leg lymphedema and 3 (17.6%) had cutaneous hemangiomas. Testicular function (spermatogenesis) was abnormal in 23 (57.5%). 32 patients or 80% had concomitant hydroceles successfully managed by eversion of the tunica vaginalis.

In conclusion, "debulking" of the scrotum and penis for genital lymphedema (either primary or secondary) is a highly satisfactory technique. Cosmesis is improved, sexual function is restored, complications are rare and readily managed by minor operations under local anesthesia and the recurrence rate is low.

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