

PRIMARY LYMPHEDEMA PRECOX OF THE PENIS AND ITS SURGICAL TREATMENT: A CASE REPORT*

Haluk Mıdıoğlu MD**, Ali Barutçu MD***, Sacit Karademir MD**
Atay Atabey MD**

SUMMARY: Mıdıoğlu H, Barutçu A, Karademir S, Atabey A. (Department of Plastic Surgery, Cumhuriyet University Faculty of Medicine, Sivas, Turkey). Primary lymphedema precox of the penis and its surgical treatment: a case report. Turk J Pediatr 34: 259-263, 1992.

Primary penile lymphedema occurs infrequently and is seen in conjunction with a similar process in the scrotum. The accepted form of treatment is surgery since conservative medical treatment is of little value. Different surgical techniques have been described, but no single procedure has emerged as the ideal treatment. Radical excision of all lymphedematous tissues and reconstruction using local penile flaps yield excellent functional and cosmetic results.

We treated a 13-year-old boy with primary penile lymphedema precox using radical excision and reconstruction with local penile flaps. At follow-up two years later, functional and cosmetic results were satisfactory. *Key words: primary lymphedema, penis, surgical treatment.*

Lymphedema, characterized by an abnormal collection of interstitial lymph fluid can be defined as a swelling caused by improper drainage of lymph from the affected region¹⁻³.

Lymphedema is commonly divided into two main types: primary and secondary. The primary type is described as a collection of lymph in interstitial tissue from a functional overload on the lymphatic system. This overload is a result of a decrease in flow due to malformation of the lymphatics^{1,4-6}. Lymphedema precox (Meige's disease), a subtype of primary lymphedema which develops at puberty, constitutes 80 percent of all primary cases of the disease.

Different methods of treating penile lymphedema have been described, but no single procedure has emerged as the ideal treatment.

We treated a patient with lymphedema precox of the penis by radical excision of all lymphedematous tissues and reconstruction using local penile flaps. This simple technique has some advantages, and functional and cosmetic results are satisfactory.

* From the Department of Plastic Surgery, Cumhuriyet University Faculty of Medicine, Sivas.

** Resident in Plastic Surgery, Cumhuriyet University Faculty of Medicine, Sivas.

*** Associate Professor of Plastic Surgery, Dokuz Eylül University Faculty of Medicine, İzmir.

Case Report

We present a 13-year-old patient who had been suffering from swelling of the penis for two years. Physical examination revealed that the penis was greatly enlarged, thickened and indurated. It measured 8 cm in circumference and 15 cm in length. The glans was not visible under an enlarged prepuce, but could be palpated within the mass (Fig. 1). The remainder of the physical examination was unremarkable and the results of extensive laboratory investigations were negative. There was no leg involvement and lymphangiographs demonstrated normal lymphatics and nodes. The genital lymphangiographs revealed what appeared to be lymphedema precox radiographically.



Fig. 1: Preoperative view of the case.

Under general anesthesia, a foley catheter was introduced into the urethra. A skin incision was made down to the fascia and a lazy-S incision on the dorsal surface from the root of the penis proximally to the balanopreputial groove. The urethra was dissected and all the diseased lymphedematous tissues and skin were excised and closed with local penile flaps after circumcision and thinning (Fig 2). The postoperative course evidenced no complications or recurrence. In addition the functional and cosmetic results were satisfactory (Fig. 3).



Fig. 2: After excision of lymphedematous tissues.



Fig. 3: Late postoperative view of the patient.

Discussion

Various methods of treating penile lymphedema have been described, but no single procedure has emerged as the ideal treatment^{1,6-10}.

There are two main principles involved in the surgical treatment of lymphedema. The first is physiological, while the second consists of excisional procedures^{3,9,11}.

Physiological procedures include lymphangioplasty, bridging methods, and lymphaticovenous shunts and flaps, where the aim is to drain the lymph from the diseased areas to areas of normal lymphatic drainage.

Excisional procedures comprise the following: 1) Removal of all diseased tissues and reconstruction using split thickness skin grafts or flaps. 2) staged subcutaneous excision beneath flaps^{2,3,8,10}.

The accepted form of treatment is surgery since conservative medical management is of little value. In 1823, Delpech¹¹ described a case of genital lymphedema successfully treated by excising all lymphedematous tissues and reconstructing the penile and scrotal coverage with local thigh flaps.

Multiple variations of Delpech's original technique have been described by Feins⁸, and Tapper and associates⁷, but they all share a common theme, excision of the superficial lymphatics, subcutaneous tissue and skin at the level of Buck's fascia on the penis. Reconstruction and coverage varies following this type of radical excision using split thickness skin grafts, flaps (local, rotational, scrotal, fasciocutaneous, myocutaneous, cutaneous) or their combinations^{2,3,10,12}.

All the surgical procedures mentioned have some associated complications such as hematoma, edema, infection, abscess formation, urethral injury, painful erection and recurrence, but in the radical excisional technique, these complications may occur infrequently^{1,3,6-8}.

This simple excisional technique also has some advantages such as removal of all diseased tissues being accomplished in one stage, a shorter hospitalization period, less costly, better cosmetic and functional results, and no graft contracture. However, the important disadvantage is that this technique is not applicable to all lymphedematous patients^{1,6-8}. Primary lymphedema of the genitalia is an infrequent occurrence. Penile lymphedema is still more infrequent, and is usually seen in conjunction with a similar process in the scrotum. This condition has serious functional, cosmetic and possible malignant consequences. Conservative treatment has proved ineffective, necessitating surgical intervention. Complete excision of all diseased fibrotic and lymphedematous tissues, skin and reconstruction using split thickness skin grafts, flaps or their combinations is the operative procedure of choice for primary lymphedema of the genitalia. The results of this procedure are excellent if all involved tissues are removed.

Excisional procedures produce excellent results, and in our opinion, are to be preferred in most cases of genital lymphedema.

We treated a patient with lymphedema precox of the penis by radical excision of all lymphedematous tissues and reconstruction using local penile flaps. There has been no evidence of complications or recurrence postoperatively, and the functional and cosmetic results were satisfactory.

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