Case Report: Scrotal Gigantism

Niema H. Al-Heeti, Abdul-Fatah N. Al-Ani

Ass. Prof. Department of Surgery ,College of Medicine, University of Anbar 1, FICMS –Plastic surgery Department of Surgery Al-Ramadi Teaching Hospital 2

Abstract:

Background: Scrotal lymph edema is rare outside endemic filariasis regions in Africa and Asia, and of variable causes.

Case presentation: In this report we describe a rare case of penoscrotal lymphedema in Iraq , and surgical technique for correction. We discuss also its etiology and therapeutic approaches. Radical excision of elephantoid tissues and reconstruction with scrotal flaps was performed. Good cosmetic and functional results were obtained with one stage procedure.

Conclusion: Surgery can be successful even in giant scrotal elephantiasis with good cosmetic and functional outcome.

Key words: penoscrotal, lymphedema, elephantiasis

Corresponding author: Niema H. Al-Heeti , dr.niema2006@yahoo.com

Introduction:

Lymphedema arise from the abnormal retention of lymphatic fluid in the subcutaneous tissues[1].Massive scrotal lymphedema, also termed elephantiasis ,can be caused by obstruction , aplasia or hypoplasia of lymphatic vessels[2]. It usually caused by infection e.g. filariasis, lymphgranuloma-venereum ,tuberculosis, leprosy .Scrotal elephantiasis is extremely rare outside endemic regions in Africa and India[3,4].Occasionally it has been attributed to radiotherapy, neoplasm, and lymphadenectomy[5,6].Primary lymphedema i.e. congenital elephantiasis, is an extremely rare condition. Patients develop edema at adolescence without restriction to the external genitalia [2].Elephantiasis of the scrotum can be a physically disabling and psychologically distressing condition , producing severe difficulties in walking ,sexual relation , 7hygiene and urination.

Despite the fact that there is no reliable or consistent treatment for lower extremity lymphedema, there are satisfactory surgical solutions for genital lymphedema [1].

Even so penoscrotal lymphedema still presents a difficult management problem.

It is necessary to emphasize that therapy is mainly surgical, with conservative medical management being of little value except in the mild cases [1,7].

Case Report

A sixty year old unmarried man blind since birth from Al-Ramadi city presented with huge scrotum (measuring 49x60x73 cm),extended below his knees. The condition started when the patient was 15 years old as scrotal swelling with bilateral leg edema , the condition progress along 45 years and the scrotum became hugely enlarged buried the penis completely and the patient voids through a hole in the anterior upper surface of the scrotum , the skin is thick with coarse fissuring and sulci . No inguinal adenopathy was found. The testes and cords were not palpable, but no abnormalities were shown by ultrasonography. A CT scan of abdomen indicates no cause of the condition. The excised scrotal tissues weight 17.93 Kg.Grossly, the specimen contained multiple fluid-filled spaces and cysts.

Histopathological examination showed nonspecific chronic inflammation with areas of epidermal thickening and dermal fibrosis, there is no parasitic infestation and the picture comes with primary penoscrotal lymphedema.The Fig.1,2,3, and 4 were before surgery.

Operative Procedure

In the lithotomy position vertical incision at the base of the buried penis. The penis was exposed and all its skin and fascia were removed deep down to buck's fascia , the wound extended laterally to both sides from lower ends of vertical incision to explore both testes (both were found to be small pale and atrophic) with normal cords and without hydrocele .

The whole edematous scrotal tissue were excised and the testes are replaced within the remaining normal scrotal skin and the wounds were closed (by local two anterior flaps and one posterior flap) in two layers . The shaft of the penis was covered with a split-thickness skin graft taken from the right thigh

The post-operative period was uneventful, the Foly's catheter and drains were removed in the Fifth and stitches in the tenth postoperative day. Look please to Fig. 5,6,7 at third post –operatively and Fig. 8and 9 at tenth post-operative day.

Discussion

The first reported surgical treatment of scrotal elephantiasis was described by Lanney in 1803, and later by Delphech in 1920[8], Delpech described the excision of 60 Ib scrotal mass with genital reconstruction using abdominal and thigh flaps .Since that time two main principles of operative treatment of penoscrotal lymphedema are formed: lymphangioplasty and lymphangiectomy. Lymphangioplasty to establish new lymphatic drainage patterns is technically difficult and unreliable: it is, therefore, not often performed [1].

These approaches to restoration of normal genitalia include reports of lymphatic bypass procedures. Orr in 1923 created a groin to scrotum skin bridge with moderate success [9].

Cabanas and Whitemore in 1982 successfully bypassed lymphatic obstruction in dogs using modified Touk Procedure[10].Campisi and Boccordo in2004 tried microsurgical technique to create lymphatic-venous shunting[11].

As practical matter, however, clinical genital elephantiasis is usually of such long duration that lymphatic bypass does not effectively reduce genital abnormalities. Thus the most effective treatment is excision of the involved tissues followed by reconstruction of the resulting defect. This involves excision of skin, subcutaneous tissues and superficial lymphatic, with preservation of penis, cord structures and testes [4,12,13].There are many options for coverage of the penoscrotal defects :scrotal flaps, fasciocutaneous thigh flaps, and skin grafts[1,2].

Our patient after a follow-up period of two years can walk easily, with good urination hygiene, and his erectile function was re-established enabling sexual intercourse.

This case shows that surgical therapy can provide good functional and cosmetic results even in massive scrotal elephantiasis.

References

1-Costa-ferreira A,Martins A,Amarante J,Silva A,Reis J:Giant Penoscrotal elephantiasis .Eur J Plast Surg 1999,22:397-399.

2-Denzinger S, Watziawek E, Burger M, F Wieland W, Otto W: Giant scrotal elephantiasis of inflammatory etiology: a case report. J of medical case reports 2007,1:23.

3-Nelson RA, Alberts GL, King LE Jr: Penile and scrotal elephantiasis caused by indolent Chlamydia trachomatis infection. Urology 2003, 61:224.

4-Kuepper D, Giant scrotal elephantiasis.Urology2005,65:389.

5-Mc Dougal WS :Lymphedema of the external genitalia. J Urol 2003,170:711-716.

6-Tammer ME, Plogmeier K, Schneider W:Surgical therapy of scrotal edema in elephantiasis congenital hereditaria (Meige type).Urol A2002,41:493-495.

7- Essential of plastic, Maxillo facial , and reconstructive surgery : Nicholas G. Georgiad and his associate , Williams and Wilkins Copyright 1987 , page 809.

8- Gibson T., Delpech : His contribution to plastic surgery and the astonishing case of scrotal elephantiasis . British Journal plastic surgery1957, 9 : 4.

9- Orr TG. : Elephantiasis nostra of genitalia : report of case and operative technique Surg. Clin. North Am. 1923,3 : 1523 .

10- Cabanas RM , Whitemore WF JR : The use of testicular lymphatics to bypass obstructed lymphatics in dogs Ivetsigate Urol.1982, 18:262.

11-Campisi C , Boccordo F:Microsurgical techniques for lymphedema treatment :Derivative lymphatic-venous Microsurgery. Would J of Surgery2004,28:609-613.

12-Apesos J, Anigian G:Reconstruction of penile and scrotal lymphedema. Ann Plast Surg1991,27:570-573.

13-Slama A, Jaidane M, Elleuch A, Ben Sorba N. Yacoub MT, Mosbah AR: Surgical treatment of penile-scrotal elephantiasis. Prog Urol 2002 ,12:337-339.

Figure. 1,2,3,and 4 were before surgery.

Figure 5,6 ,and 7 were at third post- operative day.

Figure 8 and 9 were at tenth post- operative day