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Unusual presentation of filarial scrotal tumor and its management

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Abstract

Background: Filarial Scrotal Tumor (FST) is endemic regions in country like Asia and Africa. It is of variable origin in the country like India.

Case presentation: We present a case of a 50-year-old male with huge scrotal swelling lead to chronic inflammation lesion of affected part. The patient underwent subtotal scrotoectomy saving penis, testes and spermatic cords and followed by scrotal reconstruction with adequate cosmetic and functional outcome.

Conclusion: In this report we discuss a rare case of scrotal filariasis in a patient, reflect on the etiology and the diagnostic and therapeutic approaches. Surgery can be successful even in giant filarial scrotum tumor.

Keywords: Filarial scrotal tumor (FST), scrotoplasty, penoplasty

Introduction

Massive scrotal swelling caused by obstruction, aplasia or hypoplasia of lymphatic vessels. It is usually caused by acquired infection e.g. lymphogranuloma venereum or filarial infestation with *Wuchereria bancrofti*. Filarial Scrotal Tumor (FST) is variable present in India [1, 2]. Occasionally it has been attributed to radiotherapy, neoplasm and lymphadenectomy [3, 4]. Primary lymphedema i.e. congenital elephantiasis, is an extremely rare condition. Patients develop edema at adolescence without restriction to the external genitalia. In hereditary elephantiasis of the Meige type, lymphedema of the external genitalia occurs due to malformation of lymphatic vessels [4]. In some cases hidradenitis suppurativa and lichen sclerosus et atrophicus have also been described [5]. Scrotal elephantiasis is both emotionally distressing and physically disabling. Difficulties with hygiene, urinary incontinence, loss of libido and immobility are severely debilitating symptoms. The etiology of the lymphedema usually determines the natural course and the therapeutic approach.

Case presentation

Case report

Fifty years male from Baheri, Darbhanga had chief complain of huge scrotal swelling of size 30*20*8 cm for last 10 years. Swelling was progressive with discharging ulcer from left side of scrotum since 3 years.

Patient was symptom free 10 years back. He develop scrotal swelling on left side for which eversion of sac done. However develop ulcer on operated side. Later on he gradually develop swelling whole of scrotum. Taken medication for that but not relief. Thus he came to Nalanda Medical College and Hospital, Patna, surgery OPD for further management. He has past Surgical history of operation for left Sided hydrocele 8 yrs back for which eversion of sac was done. Operated for fracture right tibia 3 yrs back for which tibia interlocking was done. There was no past medical history of HTN, DM, TB, COPD or any other chronic illness.

General examination

Patient is conscious, co-operative well oriented with time, place and person. Pallor present. No icterus, clubbing, cyanosis. CNS, CVS, Resp. system was in normal limits.

On examination, the patient had a massively enlarged scrotum extending upto his knees. The huge solid scrotal mass of 30*20*8 cm made it impossible to differentiate the anatomic structures (Figure 1) and the urethral orifice not appreciated.

The scrotal skin was thickened and edematous hiding the penis. Many superficial decubitus ulcers were found on left side of the scrotum. There was no accompanying swelling of the lower extremities.

Local examination

On standing position: Large huge mass hanging from lower abdomen. There was discharging sinus, penis was invisible.

On supine position: Large huge mass which obstruct both thigh to oppose each other. There was scarring, swellings, edema, erythema and ulcers.

On inspection

Scrotal swelling very large. Skin dark & thicken. Discharge over ulcer was present on left side which was foul smelling and filled with slough. Multiple sebaceous/epidermal cyst present all over scrotum.

On palpate

Scrotum was thick, both testis and penis not palpable. Epididymis and spermatic cord not palpable. Swelling size 30*20*8 cm. Thick edematous skin. Ulcer 10* 5 cm on left side with irregular margin. Discharge present, ulcer floor over filled with slough. Testis & b/l spermatic cords not be palpable due to thickend and edematous skin. but no abnormalities were shown

by ultrasonography. Penis was berried within scrotum. Meatal opening was not visible but patient passes urine normally. All investigation in the normal range except low hemoglobin level.

No bruit on auscultation

Management

We decided to perform a subtotal scrotoectomy with preservation of the penis and both testes and subsequent reconstruction of the scrotum. After complete evolution, PAC fitness and informed consent. Planed for operative management. Under spinal anesthesia re-evolution done. First of all urethra was identify and Foley catheterization done. (Figure 2) Through planned surgical approach dissection carried out. Both the testis and spermatic cords were preserved. (Figure 3) Preserving all the vital structures. Huge scrotal mass dissected out. And send for HPE. Then planned for reconstruct the whole genitalia. Primary closure of the wound was achieved. The excised scrotal tissue weighed 10.6 kg. (Figure 4) Grossly, the specimen shows multiple rebbery tan-white irregular tissue. Histopathological examination shows fibro collagenous tissue with moderate acute and chronic inflammation with calcification.

Skin graft taken from right side of thigh. (Figure 5) And grafted over bare over reconstructed penis and scrotum. Scrotoplasty with Penoplasty done. (Figure 6) Corrugated drain applied. Wound healing was achieved with acceptable cosmetic results. Now patient has normal physical, social, sexual life.



Fig 1: Huge scrotal swelling of size 30*20*8 cm



Fig 2: Urethra was identify and Foley catheterization done.



Fig 3: Spermatic cord and epididymis identify and preserved.



Fig 4: Huge scrotal mass dissected out weight 10.6 kg



Fig 5: Skin graft taken from right side of thigh. and grafted over bare over reconstructed penis and scrotum



Fig 6: Scrotoplasty with penoplasty done

Discussion

Scrotal elephantiasis is endemic in region of Asia and Africa. It is commonly caused by *Chlamydia trachomatis* or *Wuchereria bancrofti*. McDougal presented an overview of etiologic factors of lymphedema of the external genitalia in 2003. Besides infections, neoplasms or chronic inflammation, scrotal lymphedema is rarely caused by congenital conditions, e.g. the rare Meige syndrome leading to malformation of lymphatic vessels of the external genitalia [3]. In this case extensive diagnostics indicated no other cause than chronic inflammation. Postoperatively, even after meticulous histopathologic and electron microscopic preparation of the tissue, no other etiologic evidence was found apart from nonspecific inflammatory lesions. Some cases of scrotal lymphedema warrant elimination of the cause of the disease e.g. by antibiotic therapy. Usually there is no permanent damage to the skin, lymphatic or subcutaneous tissue [1, 6, 7]. However, in a case of persistent scrotal lymphedema, irreversible damage of the involved tissue can occur with the danger of necrotizing fasciitis. In this case we finally operated for surgical intervention. In extensive disease, complete excision of all elephantoid tissue, preferably saving the penis, spermatic cord and testes, is appropriate [2, 8, 9]. In accordance with the desires of the patient we preserved the spermatic cords and both testes despite the extent of the disease. If available, scrotal flaps are most suitable for reconstruction of the scrotum. Medial thigh flaps was used in the absence of adjacent scrotal tissue. Mesh skin graft is widely accepted for

use in penile skin defects [10]. The patient gained considerably good quality of life. Now the patient had normal sexual life. This case shows that surgical therapy can provide good functional and cosmetic results even in massive filarial scrotal tumor (FST).

Conclusion

Scrotal filariasis is variable origin in country like India. In the case presented here extensive excision of elephantoid tissue saving penis, spermatic cord and testes was performed with adequate cosmetic and functional results.

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