Case Report

Reconstructive surgery for penoscrotal elephantiasis: A case report

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Abstract

Elephantiasis of the external genitalia is characterized by lymphedema and thickening of the subcutaneous tissues. This gives the skin an appearance similar to a pachyderm skin. Reconstructive surgery is often the only way to restore aesthetic and functional aspects of the external genitalia. We aim to report a 63 year man with penoscrotal elephantiasis who underwent excision and penoscrotal reconstruction at the department of General Surgery, Mamata General Hospital, Khammam.

Keywords: Elephantiasis, Penoscrotal, Scrotoplasty.

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INTRODUCTION

Penoscrotal elephantiasis can lead to huge enlargement of the scrotal sac and the penis. It is as a result of lymphatic obstruction and subsequent infiltration of the subcutaneous tissue of the external genitalia with lymph[1]. Aberrant lymphatic drainage may be idiopathic or secondary to parasitic infection, radiation, malignancy, surgery, tuberculosis, syphilis, leprosy, and lymphogranuloma. The problem of lymphedema involving the genitals and perineum occurs frequently where filariasis is endemic, in countries such as India[2]. Elephantiasis of the scrotum can be a physically disabling and psychologically distressing condition, producing severe difficulties in walking, sexual relation, hygiene and urination. It cripples both psychological and physical well-being of the patient. There are satisfactory surgical solutions for genital lymphedema[2]. 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[2,3]. We aim to report a case of penoscrotal elephantiasis which was managed at the Department of General Surgery, Mamata General Hospital, Khammam.

CASE REPORT

A 63 year old farmer, presented to the department of General Surgery, Mamata General Hospital with history of gradual enlargement of scrotal sac over two years. The swelling was painless and itchy without any history of lower urinary tract symptoms, pelvic surgery or venereal disease. Physical examination revealed an enlarged scrotal sac and partially buried penis **[Figure-1]**. The scrotal skin showed normal rugosity with thickened lymphedematous tissue. The penile shaft also showed thickened tissue, small discrete warty growths were present over skin covering glans penis with serous discharge. Testicles could not be palpated due to enlarged scrotal mass. The rest of the physical exam was normal. Looking at the epidemiological and clinical findings, diagnosis of penoscrotal elephantiasis was made. The patient was advised to take dose of anti filarial drugs (albendazol and ivermectin). He washed the scrotal mass twice per day for three days with a providon iodin solution. Preoperative testing was performed before surgical procedure. He underwent surgical excision of the

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subcutaneous tissues and reconstruction of his penis and scrotum. The procedure performed included steps as follows; anterior midline incision over the scrotal mass, two oblique incisions toward the groin starting from cranial end of the previous incision to find and dissect the spermatid cords and testicles, excision of subcutaneous tissue and skin with careful haemostasis, resection of all abnormal tissue covering the penis, left side orchidectomy was done as less amount of normal tissue was available for safe closer to preserve both testis, fixation of the right testis to the bottom of the skin flaps to be used for scrotal reconstruction, drainage of both hemi-scrotum which were closed using absorbable sutures **[Figure-2]** and bladder was drained with size 20F foley's urethral catheter. The excised scrotal mass contained gelatinous liquid. The subcutaneous tissue was very thick and whitish. All resected tissue weighed 500 gms. The drains were removed on the fourth post-operative day. On 5th day skin graft had accepted on shaft of penis **[Figure-3]**. No further complication was noted. The penis and the scrotum wounds were acceptable at 2 weeks post-operative review. The scrotal sac was much reduced and flexible **[Figure 4]**.

Figure 1

Figure 2

Figure 3

Figure 4

DISCUSSION

Elephantiasis of the genitalia is more frequently encountered in tropical countries [4] and can affect about 20% of the male population[5]. In tropical countries, microfilaria is the leading cause of elephantiasis of the male external genitalia[6]. In India also it is mostly found in Andhra Pradesh, Orissa, Assam, Madhya Pradesh, Tamil Nadu and in Kerala[7]. The penoscrotal elephantiasis can be defined as massive enlargement of the scrotal sac secondary to a subcutaneous accumulation of lymphatic fluid. It is also called lymphedema[1]. Aberrant lymphatic drainage may be idiopathic or secondary. The essential findings to make diagnosis were the appearance of pachydermal skin. It has a debilitating effect on both physical and psychological well-being of the patient. The diagnosis is mostly made based on epidemiological evidence and clinical features especially in the early phase of the disease. Though the diagnosis is made clinically, some laboratory test may be of importance. The microfilariae may be found in the serum, ultrasonography of scrotal sac may pick the adult worms and isotope bi pedal lymphography or radiography may be needed to outline the lymphatics[1]. 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[3]. There are many options for coverage of the penoscrotal defects. In 1933, Muller and Jordan already proposed penile split skin grafting and cover of the testes with posterior scrotal flaps[8]. That technique was chosen in this case because it is simple and provides good cosmetic and functional results.

Complications of this technique include haemorrhage, iatrogenic urethral injury, hematoma and surgical site infection. Incomplete excision may lead to recurrence[9]. Post-operative review revealed satisfactory outcome, both functionally and aesthetically.

CONCLUSION

External genitalia elephantiasis is a debilitating condition. It causes both psychological and physically distress. When it affects the external genitalia, there may delay in presentation due to private nature of the area. The commonest aetiological factor in the tropics is microfilariasis. Surgical excision followed by a penoscrotoplasty gives excellent result.

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