PENOSCROTAL FILARIASIS IN A 53 YEAR OLD MALE: A CASE REPORT

Shilpi Roy1*, Vipul Kumar Srivastava1, Ram Niwas Meena2 and Rahul Khanna3

1Resident, Department of General Surgery, Institute of Medical Sciences, BHU, Varanasi
2Associate Professor, Department of General Surgery, Institute of Medical Sciences, BHU, Varanasi
3Professor, Department of General Surgery, Institute of Medical Sciences, BHU, Varanasi

ABSTRACT

Introduction: The Penoscrotal filariasis is the result of lymphatic obstruction by the parasite (Wuchereria bancrofti) leading to subsequent infiltration of lymph into the subcutaneous tissue of the external genitalia leading to disfigurement causing significant public health problem.

Case Report: A 53 year old man presented with enlarged penis and scrotum for past four years without difficulty in micturition. On examination the penis and scrotum were enlarged and edematous with multiple small pedunculated growths over the penis. Scrotal skin was thickened without any ulceration or discharge. Diagnosis of penoscrotal filariasis was made and patent was operated. Penoscrotoplasty with penile SSG was done. Postoperatively patient did well and results were satisfactory.

Conclusion: Here we report this case to emphasize on the fact that penoscrotal filariasis may also affect elderly population and may sometimes not be associated with hydrocele. The diagnosis of penoscrotal filariasis is mainly clinical with limited options of surgical treatment the results of which may not be always satisfactory.

INTRODUCTION

Lymphatic filariasis, also known as elephantiasis, is a painful and disfiguring disease causing significant public health problem. As per the World Health Organization (WHO), approximately 120 million people are affected by this condition and of whom 25 million are men who exhibit urogenital manifestations including hydrocele and penoscrotal lymphedema [1]. This lymphedema is the result of lymphatic obstruction by the parasite (Wuchereria bancrofti) leading to subsequent infiltration of lymph into the subcutaneous tissue of the external genitalia. This causes significant burden on physical health, psychosocial well-being and economic status of the patient. WHO launched the Global Programme to Eliminate Lymphatic Filariasis (GPELF) in 2000 aiming to eliminate this disease by 2020. But still we can find many cases especially in the endemic areas like Bihar, Kerala, Uttar Pradesh, etc. [2].

Previously it was thought that the disease affected only adults but now it is thought that most of the infections are acquired at childhood which present later on. The disease can be very often seen in young individuals in endemic zones either as asymptomatic carriers or in the form of hydrocele. In its severe form it presents as penoscrotal edema with skin changes. However it is less likely to get a penoscrotal filariasis in old age person. Hence we report this case of a penoscrotal filariasis in a 53 year old man.

Case Report

A 53 year old man presented to General Surgery OPD of Sir Sunderlal Hospital, Institute of Medical Sciences, Banaras Hindu University, Varanasi Uttar Pradesh India, with enlarged penis and scrotum for past four years. From past one year he was not able to see his glans penis due to extensive edema. However he did not have any difficulty in micturition. On examination the penis and scrotum were enlarged (of size 14x10 cm and 15x12 cm respectively) and edematous with multiple small pedunculated growths over the penis. Scrotal skin was thickened without any ulceration or discharge. Bilateral testes could not be palpated due to swelling of scrotum [Figure 1& 2]. Prepuce could not be retracted. He came from an endemic zone of Uttar Pradesh with no similar complaints in any of the family members.

Inguinoscrotal Ultrasonography confirmed diseased subcutaneous scrotal and penile tissue with normal bilateral testicular morphology and blood supply. Peripheral blood tests for parasite were negative. Diagnosis of penoscrotal filariasis was made and patient was given pharmacological treatment.

*Corresponding author: Shilpi Roy
Resident, Department of General Surgery, Institute of Medical Sciences, BHU, Varanasi
with Diethylcarbamazine (DEC) (6mg /kg/day) for two weeks. Meanwhile investigations for pre-anesthetic checkup were sent. Surgery was planned. Per urethral catheterisation was done. Penis was degloved above Buck’s fascia and excess scrotal skin along with subcutaneous tissue was excised taking care not to injure the urethra which was guided by the Foley’s catheter [Figure 3]. A ‘Y’ shaped normal scrotal tissue flap was taken to cover both the testes and drain was placed. Degloved penis was covered using split thickness skin graft from thigh. Compression dressing was done and patient was followed up. On 5th post-operative day graft dressing of penis was opened and graft uptake was found to be adequate so patient was discharged on day 7 with regular follow-up advice. During follow-up period patient had good quality of life with great emotional satisfaction.

**DISCUSSION**

Penoscrotal lymphedema is due to the accumulation of lymph in superficial lymphatic vessels between skin and fascia (Colles’ fascia in scrotum and Buck’s fascia in penis) [3]. This lymphedema can be either primary or secondary. In primary or congenital lymphedema there is a congenital abnormality of lymphatic system leading to lymphatic obstruction which may manifest early or late in the life. However secondary lymphedema are caused mainly due to parasitic infestation like *Wuchereria bancrofti* seen in lymphatic filariasis [4]. In our case also the lymphedema was of secondary type caused by *W. bancrofti*. These adult filarial worms cause inflammation of the lymphatic system leading to lymphatic vessel damage which predisposes the affected area to recurrent bacterial infection. Most of the infected people are asymptomatic, but virtually all of them suffer from damages to the lymphatic system and the kidneys, and from an altered body’s immune system [5].

In post pubertal males, adult *Wuchereria bancrofti* organisms are found most commonly in the intra-scrotal lymphatic vessels which can be easily visualized on an ultrasound examination. Inflammation resulting from adult worm death, in this area, may present as funiculitis, epididymitis, or orchitis. The chronic manifestations of lymphedema and/or hydrocele develop only in 30% of the infected persons due to the damage caused to the lymphatics [6]. Also these people are less likely to be benefitted by use of DEC as the infection in them has already subsided. So surgical option is the only choice left for them. We could see this clearly in our case also.

Penoscrotal filariasis is relatively a rare clinical condition mainly diagnosed clinically by skin changes such as skin fold thickening, hyperkeratosis, hypo or hypertrichosis, chronic ulceration, and epidermal or sub epidermal nodule [7]. Biochemical tests are of less significance in these cases as they do not have any active infection. It was clearly evident in our case also where we had to rely on our clinical experience only. Also one unusual finding in our case was that both the testes were normal in spite of having such a large penoscrotal filariasis. This may also be attributed to the fact that scrotum and penis have different lymphatic drainage (Inguinal nodes) than testes and tunica vaginalis (which drain along the veins to retroperitoneum).

The treatment of penoscrotal filariasis is mainly surgical. Surgeries can be either Conservative or excisional with reconstruction. Conservative surgeries which include Figure 3 Intraoperative photograph of patient showing degloved penis with exposed bilateral testes and Foley’s catheter in situ.
lymphangioplasty are obsolete nowadays. We now rely on excisional surgeries with reconstruction as they give better aesthetic results and quick response. The principle is to remove all edematous tissue with penoscrotoplasty [8]. Reconstruction can be done using either loco-regional flaps or split thickness skin graft. Flaps have better aesthetic outcome and are more physiological. Posterolateral flaps of scrotum are preferred if the posterior scrotal skin is not involved as we did in our case. There is also a reason why posterior scrotal skin is often spared in penoscrotal filariasis. This is due to different lymphatic drainage of anterior and posterior scrotum.

CONCLUSION

Penoscrotal filariasis is considered to be affecting younger age group usually and that too with presence of hydrocele. Here we report this case to emphasize on the fact that it may also affect elderly population and may sometimes not be associated with hydrocele. The diagnosis of penoscrotal filariasis is mainly clinical with limited options of surgical treatment the results of which may not be always satisfactory.

References

1. Surgical approaches to the urogenital manifestations of lymphatic filariasis. Report from an informal consultation among experts, World Health Organization; 2019
5. https://www.who.int/health-topics/lymphatic-filariasis#tab=tab_2

How to cite this article:

******