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SCROTUM HISTOPATHY OF A RARE CASE OF GIANT LYMPHATIC FILARIASIS

Histopathology

Dr Shikha Sachan PG Resident,

Dr Neelima Verma Professor, Department Of Pathology GSVM Kanpur.

Dr Vandana Mishra Tewari Assistant Professor, GSVM Medical College Kanpur.

ABSTRACT

In eastern uttar pradesh which is the part of india, lymphatic filariasis is a endemic disease and scrotal elephantiasis is a rare manifestation. The severity of scrotal elephantiasis can lead to a negative impact on quality of life for patients. In this case, a 70-year-old male lives in an area of Uttar Pradesh where lymphatic filariasis is endemic and has a 10-year history of giant scrotal swelling. In spite of the fact that many case reports have been published on the internet, very few reviews have examined the pathogenesis and histological characteristics of the disease.

KEYWORDS

Giant scrotum, lymphatic filariasis, Scrotal elephantiasis

INTRODUCTION-

Lymphatic filariasis is a endemic disease in eastern uttar pradesh which is one of the state of india. Scrotal elephantiasis is a rare manifestation of Wuchereria bancrofti infection. 70% Infected individuals are asymptomatic.[1] This condition happens when adult worms of W. bancrofti reside and obstruct the lymphatic vessels draining the scrotum. Some other conditions can cause the obstruction of the lymphatic drainage such as congenital or acquired aplasia or hypoplasia of the lymphatic vessels but infective obstruction of the lymphatic drainage by W. bancrofti is the most common cause.[2] There are many physical and emotional strains associated with scrotal elephantiasis, which adversely affects the quality of life of men who suffer from it. Most of the time, these chronic, enormous scrotal swellings are the result of irreversible, chronic lymphedema and extensive fibrosis, which must be treated surgically. Among middle-aged men, we report a rare case of giant scrotal lymphedema. [2,5]

CASE -

A 70 years old male patient, with a weight of 97 kg was admitted with bilateral massively enlarged scrotum. The scrotal lymphoedema had started 10 years earlier and had been relentlessly progressing to reach the presenting size of enormous proportion. There was no history of any radiation. All the routine blood investigations were found normal. Imaging studies revealed bilateral atrophic testis. Neither clinical examination nor investigations revealed any other abnormality in the abdomen, inguinal regions or in the lower limbs. Though the cause of the lymphoedema was thought to be filariasis owing to its endemicity the same could not be proved by investigations.

Gross -

The specimen received in jar labelled as excised scrotum with bilateral testes. Specimen were extremely large at presentation, with a weight of 25kg and measuring 47× 33× 17 cm. Skin surface is bossilated and thickened and is hard in consistency and tissue is completely covered by skin. On undersurface bilateral tissue is identified and both testes are ligated. One sided testes measured 7× 4× 2 cm and stony hard in consistency. On cutting , whole cut surface including area of testes proper is replaced by greyish white in colour and solid in consistency. Other sided testis 6× 4× 2 cm soft to firm in consistency with small ,tiny part of spermatic cord which is measuring 1×1.5cm.On cutting testis proper is seen which is measuring 3× 2.5cm , greyish white in colour. Cut surface of both side of scrotal area covered with skin is greyish white , stony hard in consistency.

Fig 1- Dorsal View **Fig 2-** Ventral view

Fig- Excised Scrotum With Bilateral Testis (dorsal And Ventral View) Grossly

Microscopically, the section from testis with tunica shows extensive collagenization with inflammatory cell infiltrates comprising of lymphocytes ,macrophages and plasma cells and occasional eosinophils. At one places dead calcified adult worm is seen. Seminiferous tubules are hyalinized and atrophic.(FIGURE 1 AND 2)

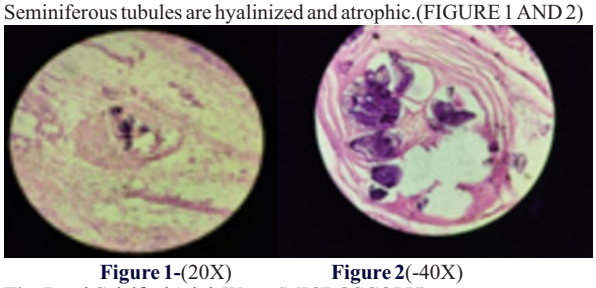

Figure 1-(20X) **Figure 2**(-40X)

Fig- Dead Calcified Adult Worm(MICROSCOPY)

DISCUSSION-

It is endemic in rural and urban areas in Uttar Pradesh, transmitted mainly by culex mosquitoes.[6,7] Scrotal and limb elephantiasis are rare clinical manifestations of the infection with W. bancrofti. Despite the absence of microfilaremia in this patient, the histopathological findings were consistent with lymphatic filariasis. This patient did not have any history of abdominal or inguinal surgeries, excluding the possibility of postsurgical scrotal lymphedema. Lymphatic filariasis occurs when the main lymphatic channels become dilated and flow is impaired, causing lymphostasis, which leads to an accumulation of interstitial fluid, proteins and growth factors. The result is an increase in collagen production by fibroblasts, an accumulation of inflammatory cells, and an activation of keratinocytes. This leads to subdermal fibrosis, thickening, and proliferation of the dermis. Fibrosis gradually enlarges the genital skin, causing it to become coarse and tough[10].

CONCLUSION-

This report presents a case of a 25kg scrotum with bilateral testes with histopathological findings confirming scrotal lymphatic filariasis. With the help of histopathological examination we can exclude other causes of scrotal elephantiasis such as previous history of surgery , irradiation and malignancies from lymphatic filariasis.

REFERENCES

1. Kazura JW, Bockarie M, Alexander N, Perry R, Bockarie F, Dagoro H, et al. Transmission intensity and its relationship to infection and disease due to Wuchereria bancrofti in Papua New Guinea. J Infect Dis 1997;176:242-6.https://www.researchgate.net/publication/321080282_Giant_scrotal.
2. Thejeswi P, Prabhu S, Augustine AJ, Ram S. Giant scrotal lymphoedema – A case report. Int J Surg Case Rep 2012;3: 269-.https://pubmed.ncbi.nlm.nih.gov/22504481
3. Viehoff PB, Gielink PD, Damstra RJ, Heerkens YF, van Ravensberg DC, Neumann MH, et al. Functioning in lymphedema from the patients' perspective using the international classification of functioning, disability and health (ICF) as a reference. Acta Oncol 2015;54:411-21.
4. Singh V, Sinha RJ, Sankhwar SN, Kumar V. Reconstructive surgery for penoscrotal filarial lymphedema: A decade of experience and follow-up. Urology 2011;77:1228-31.
5. Shah KG, Choksi DB, Vohra AS, Barad J. Giant scrotal and penile elephantiasis of idiopathic etiology. A case report. Internet J Urol 2007;5:1-4.

6. Gyapong JO, Adjei S, Sackey SO. Descriptive epidemiology of lymphatic filariasis in Ghana. Trans R Soc Trop Med Hyg 1996;90:26–30.
7. Dunyo SK, Appawu M, Nkrumah FK, Baffoe-Wilmot A, Pedersen EM, Simonsen PE, et al. Lymphatic filariasis on the coast of Ghana. Trans R Soc Trop Med Hyg 1996;90: 634-8.
8. Shenoy RK. Clinical and pathological aspects of filarial lymphedema and its management. Korean J Parasitol 2008;46: 119-25.
9. Rahman GA, Adigun IA, Yusuf IF, Aderibigbe AB, Etonyeaku AC. Giant scrotal lymphedema of unclear etiology: A case report. J Med Case Rep 2009;3:7295
10. M. Modolin, A.I. Mitre, J.C. da Silva, W. Cintra, A.P. Quagliano, S. Arap, et al.Surgical treatment of lymphedema of the penis and scrotum Dermatologic Clinics, 61 (2006), pp. 2189-2194 Google Scholar