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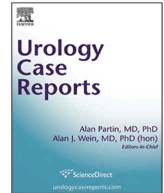

Trauma and reconstruction

Penoscrotal lymphedema revealing a lymphoma: A case report

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A R T I C L E I N F O

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A B S T R A C T

Penoscrotal lymphedema is a rare condition. The authors present an exceptional case of a 60-year-old male patient who presented with a penoscrotal lymphedema leading to the discovery of an underlying lymphoma. The patient underwent chemotherapy followed by an excision of the affected tissues with reconstructive surgery with satisfactory results.

Introduction

Lymphedema is a disorder clinically characterized by swelling of soft tissues due to the accumulation of lymphatic fluid in the skin and subcutaneous tissues due to lymphatic drainage impairment.[1,2,3]

Penoscrotal lymphedema is a rare condition which can impair the quality of life of patients due to the distresses it causes.

Lymphedema is classified as either primary or secondary depending on the cause.[3] Association of genital lymphedema and lymphoma is very exceptional.

There is no ideal treatment for genital lymphedema.[4,1] Surgical treatment is necessary in some cases.[5,1]

Case report

A 60-year-old male with no history of sexually transmitted infections or recent travel who presented with penoscrotal lymphedema (Fig. 1) associated with fever and weight loss with no other symptoms. During the physical examination, we discovered a left inguinal lymphadenopathy.

Ultrasound imaging showed a thickening of the scrotum with normal scrotal contents.

The pathologic results of a biopsy of the lymphadenopathy showed a Hodgkin lymphoma CD15$^+$ and CD30$^+$.

A CT scan performed showed; bilateral upper and centrilobular pulmonary emphysema, large lateral aortic, common iliac and left external iliac lymphadenopathies.

The patient had 8 cycles of chemotherapy with the association of Adriamycin, Bleomycin, Vinblastine and Dacarbazine. He was advised to put on scrotal support garment to help reduce the oedema.

A PET-CT done after 2 cycles of chemotherapy showed a complete response Deauville 2.

Physical examination performed after the chemotherapy didn't show any significant reduction in penoscrotal oedema.

All Laboratory examinations were normal including a serology for filariasis and ultrasound imaging findings unchanged.

Surgery was performed because of the psychological distress caused by the patient's inability to have an erection.

We performed an excision of the affected scrotal and penile skin. The reconstruction of the scrotum was made using local flaps and the drain placed was removed on post-operative day 3. The penile shaft was covered with graft harvested from the suprapubic abdominal wall (Fig. 2).

For good wound healing results, the penile dressing was first changed on post-operative day 5 and he was put on benzodiazepine for erection prevention. He was discharged on postoperative day 10.

Histologic examination showed the presence of elastorrhexis and fibrosis in the dermis with no sign of malignancy.

Six months after the intervention, there has been no recurrence, all wounds have healed with acceptable aesthetic and the patient expresses satisfaction in his sex life (Fig. 3).

Discussion

Lymphedema is a disorder clinically characterized by swelling of soft tissues due to the accumulation of lymphatic fluid in the skin and

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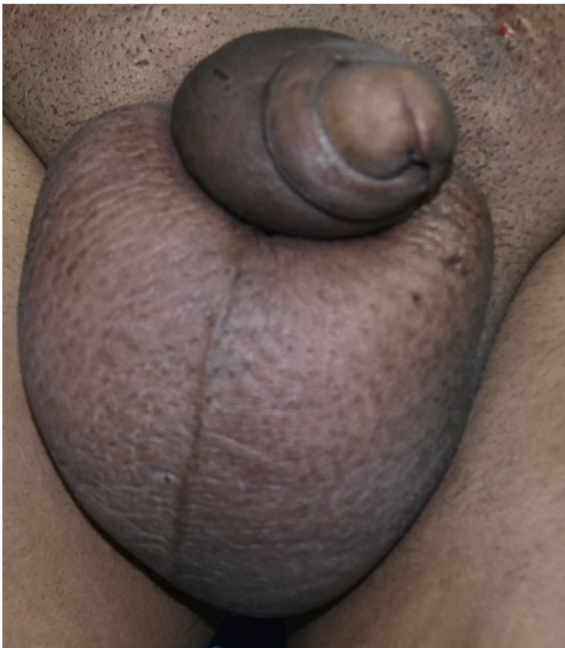

Fig. 1. Penoscrotal lymphoedema.

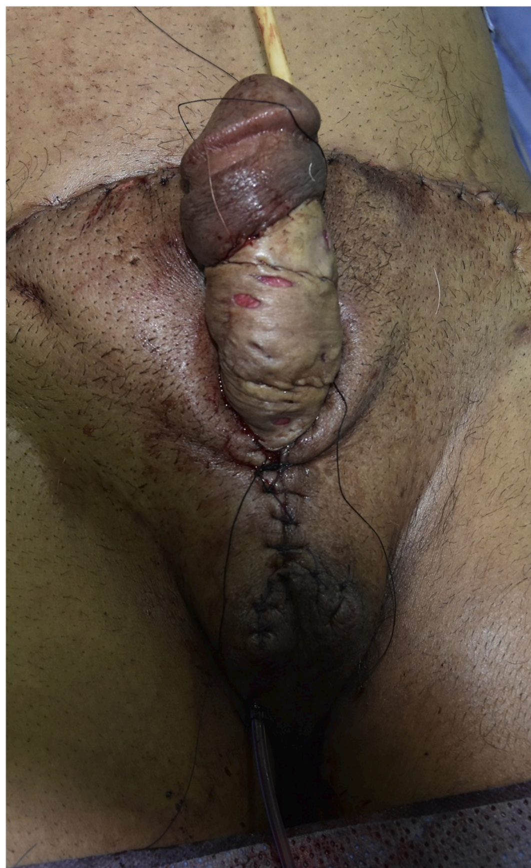

Fig. 2. Reconstruction of the scrotum using local flaps, the shaft of the penis was covered with graft harvested on the suprapubic abdominal wall.

subcutaneous tissues.[1,2]

Genital lymphedema is a rare condition.[1]

Amongst the complications of lymphedema are infections, lymphangiectasias and lymphangioma circumscriptum.[2] Chronic

Fig. 3. 6 months after the procedure; satisfactory aesthetic result with no recurrence of lymphedema.

lymphedemas can also be responsible for cutaneous neoplasms, such as lymphangiosarcoma, squamous cell carcinoma, Kaposi sarcoma, or lymphoma.[2,3] Genital lymphedema may cause sexual, psychological and functional distress, hence impairing quality of life.[2] The quality of life of our patient was affected because of his altered sex life. He had no functional distress such as walking and micturating.

Causes of lymphedema can be divided into primary and secondary. Primary lymphedemas are due to malformation or dysfunction of the lymphatic vessels such as the congenital hereditary elephantiasis of the Meige type1.[3] Secondary lymphedema results from disruption or obstruction of a normal lymphatic system.[3]

The most prevalent cause of lymphedema is filariasis. Other causes include vein stripping, peripheral vascular surgery, oncologic surgery, radiation, infection, and lymphatic tumour invasion or compression, and disorders of fluid balance.[3]

It is safe to say that our patient's genital lymphedema was secondary to his neoplasm given the presence of multiple lymphadenopathies and also the absence of any other risk factors of lymphedema.

Lymphedema associated with malignant lymphoma has been reported in literature, most being an association of cutaneous lymphoma and limb lymphedema.

At present, genital lymphedema has no ideal treatment.[1,4] Surgical treatment is necessary when faced with severe penoscrotal lymphedema or when there is no improvement after using supportive garments.[5,1] The choice of treatment of secondary genital lymphedema is independent of its underlying cause.[1] The use of long term supportive scrotal garments was not adequate for our patient. Our patient underwent un excision of the affected scrotum and penile skin. The reconstruction of the scrotum was done using local flaps. The penile shaft was covered with graft harvested on the suprapubic abdominal wall which was placed spirally to prevent longitudinal retraction.

There were no complications such as hematoma and infections after the surgery. As at 6 months after treatment there hasn't been recurrence of the lymphedema.

Conclusion

Penoscrotal lymphedema is a rare condition which can cause great distress. In our case we treated a patient who had a penoscrotal lymphedema lymphoma secondary to lymphoma with satisfactory results.

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