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Image of Interest

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Elephantiasis Nostras Verrucosa

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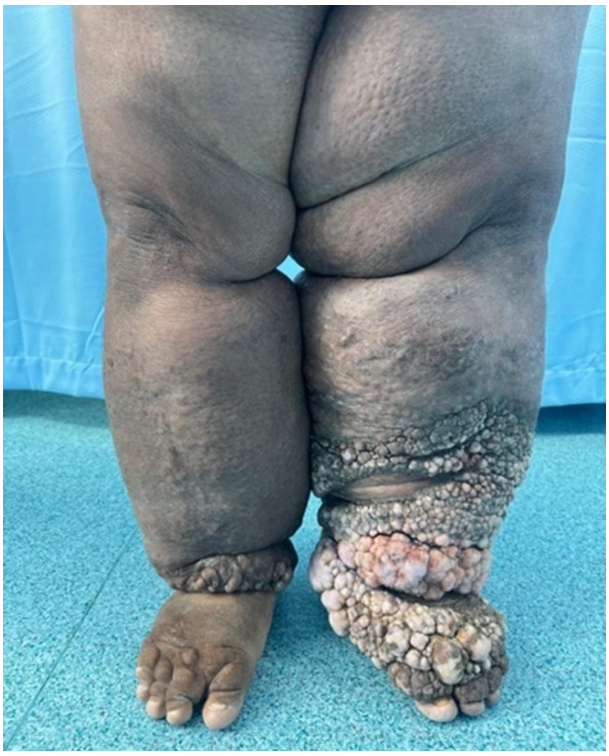

A 51-year-old morbidly obese man (BMI 55 kg/m^2) presented to the hospital with shortness dyspnoea on exertion, orthopnoea, and worsening leg swelling, more pronounced on the left side (**Figure 1**). He had chronic lower limb swelling for the past nine years and developed nodules on the left leg over the past six months. His medical history included chronic hypertension, hyperlipidaemia, iron-deficiency anaemia, and chronic kidney disease. Thyroid function test, inflammatory markers and full blood count (normal leukocyte levels and differential counts) were normal. Peripheral blood smear, stool examinations and filarial antigen testing were all negatives. A venous doppler ultrasound examinations were negative for venous thrombosis. He was referred to the dermatology service, and a diagnosis of Elephantiasis Nostras Verrucosa (ENV) was made.

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The images showed gross lymphoedema of the lower limbs extending from the feet to the knees, with hyperkeratotic papillomatous nodules, verrucous skin folds, and areas of lichenification on the left lower limb, giving it a woody, cobblestone-like appearance (**Figures 2a and b**). Additionally, there were overlying ulcerations and crusting. There were mild nodular changes of the right side. A diagnosis of *Elephantiasis Nostras Verrucosa* (ENV) was made.

The clinical examination findings were consistent with elephantiasis resulting from chronic lymphatic obstruction. Common aetiologies of lymphatic obstruction and oedema include obesity, hypothyroidism, congestive heart failure, bacterial infections such as recurrent cellulitis or filariasis, malignancies such as lymphoma or pelvic tumours, previous surgery, trauma, lymphatic fibrosis secondary to radiation therapy, venous thrombosis, scleroderma, and Milroy's disease (congenital lymphoedema).[1,2] Given the patient's negative investigations, other possible diagnoses—such as lymphatic filariasis, lipodermatosclerosis, pretibial myxoedema, and venous stasis dermatitis—were excluded.

ENV is primarily a clinical diagnosis, with a positive Kaposi–Stemmer sign—an inability to pinch the skin at the base of the second toe—serving as a characteristic indicator of lymphoedema. Routine laboratory evaluations typically include full blood counts, thyroid function tests, C-reactive protein, erythrocyte sedimentation rate, and renal function tests.[2] Additional investigations aimed at excluding filarial infection, such as peripheral blood films, stool examinations, immunochromatographic card (ICT) testing for antigenaemia, and ultrasonography to detect adult worms, are generally negative once lymphoedema is established.[3] Ultrasonography may occasionally be used to assess tissue thickening in affected limbs.

Lymphoscintigraphy provides further insight into both structural and functional abnormalities of the lymphatic system, allowing visualisation of lymphatic dilatation, dermal backflow, or lymphatic obstruction in oedematous limbs. The role of skin biopsy may be useful in excluding secondary malignancy; however, it is not necessary for diagnosis. Histologically, ENV commonly demonstrates epidermal hyperkeratosis, acanthosis, and chronic fibrosis of the dermis and subcutaneous tissue.[4]

Although a biopsy was initially considered for our patient, dermatological consultation indicated that, given the chronic nature of the condition, the likelihood of obtaining a diagnostic result was low. The patient also declined a biopsy.

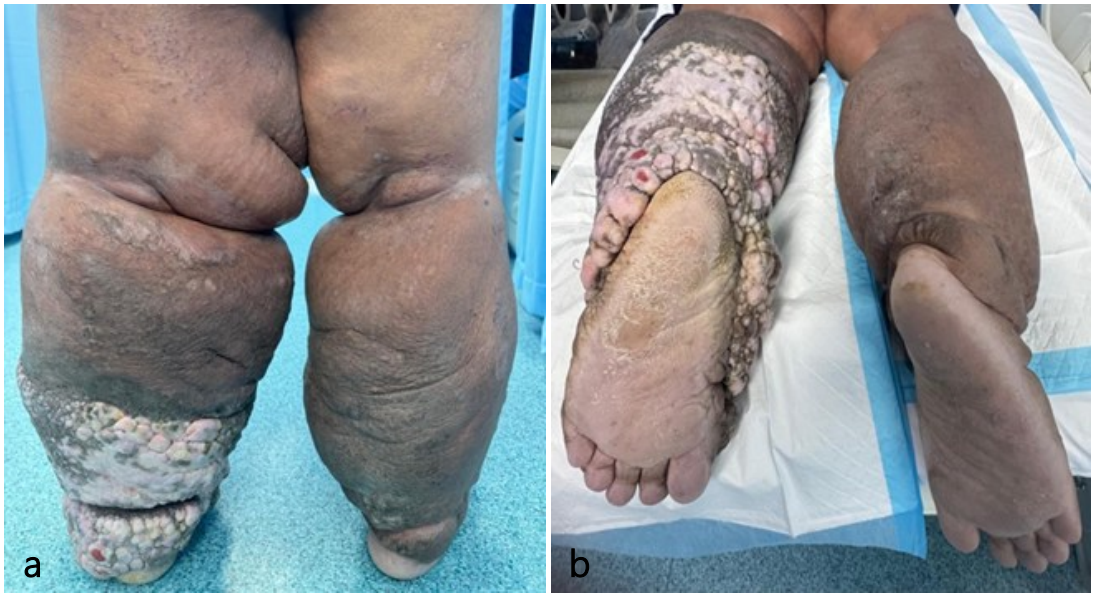

Figure 2: a & b) Images from the back showing the swollen lower limbs with the ENV on the left foot and mild nodular changes affecting the right leg.

ENV is a progressive disease and to date, has no known cure. Management focuses primarily on reducing lymphatic stasis to improve cutaneous changes. Conservative management includes weight reduction and compression dressings. Topical keratolytics, such as urea or salicylic acid, may be used to thin hyperkeratotic areas, while topical antibacterials can help prevent secondary skin infections. The use of a pneumatic pump has been reported to reduce limb circumference and improve skin condition.

Medical treatment may include systemic or topical retinoids. Surgical intervention may be indicated in cases that are non-responsive to the aforementioned treatments. Excision and debridement may reduce fibrosis and nodules but do not correct the underlying pathology.[2,5] Several case reports have shown that ablative carbon dioxide laser therapy is a well-tolerated treatment modality that provides cosmetic and symptomatic benefits for patients with ENV.

Complications of ENV may include superficial ulcers, cellulitis, osteomyelitis, and septic arthritis. In rare instances, patients may develop severe sepsis, significant disability, and may require amputation.[5] In the late stages associated with lymphorrhoea, there is also an increased risk of malignancies such as squamous cell carcinoma and angiosarcoma (Stewart–Treves syndrome).[6] Therefore, patients should be followed up closely to monitor for further complications.

It is important to distinguish that lymphatic filariasis which is more common and endemic in tropical regions, shares several clinical features with ENV. A history of exposure in endemic areas, the absence of verrucous plaques, and nocturnal symptoms—such as pruritus related to nocturnal periodicity of microfilariae—support a diagnosis of filariasis rather than ENV.

Abbreviations

ENV	Elephantiasis Nostras Verrucosa
ICT	Immunochromatographic card

Declarations

Patient Consent

Patient consent has been obtained.

Disclosure and Conflict of Interest

The authors declare that they have no conflicts of interest and no financial disclosures relevant to this case report.

Acknowledgments

None

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