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# Elephantiasis Nostras Verrucosa

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#### **Abstract**

Elephantiasis nostras verrucosa is a rare progressive cutaneous hypertrophy resulting from chronic nonfilarial lymphedema secondary to obstruction of the lymphatic system. Its etiology includes multiple systemic and local conditions. It is characterized by presenting skin with hyperkeratosis, papillomatosis, and verrucous hyperplasia. There are various local medical therapeutic options, reserving surgical management for severe cases.

Keywords: Elephantiasis, non-filarial lymphedema, lymphatic system, cellulitis

#### Introduction

Elephantiasis nostras verrucosa is a rare progressive cutaneous hypertrophy resulting from chronic non-filarial lymphedema secondary to obstruction of the lymphatic system <sup>[1]</sup>. In this article, a clinical case is reported, with the characteristic lesions of this condition.

### Case report

A 47-year-old man with a history of obesity (body mass index of 42 kg/m²), hypertension, and diabetes was referred by his primary care physician for a 1-year-old lower extremity skin condition characterized by the appearance of punctate edema initially, to which were added multiple confluent papules that progressed to hyperkeratotic plaques. For 2 days before, he had presented erythema, worsening edema and pain in the right leg, as well as fever (Fig 1). Given a diagnosis of cellulitis, he was admitted to the hospital. He was treated with antibiotics and wound care, and within a few days his skin returned to the previously described appearance (Fig 2, 3). He was diagnosed with elephantiasis nostras verrucosa. Physical measures were initiated to improve the edema and he is currently under outpatient follow-up by the Dermatology department.



Fig 1: Elephantiasis Nostras Verrucosa, with cellulitis in the right leg



Fig 2: Elephantiasis Nostras Verrucosa, after antibiotic treatment



Fig 3: Elephantiasis Nostras Verrucosa, close

#### Discussion

Within the pathophysiology of Elephantiasis Nostras Verrucosa, it has been described prolonged accumulation of protein-rich interstitial fluid, which induces fibroblast proliferation and impairs the local immune response, leading to increased fibrosis of the dermis and increased susceptibility to infections <sup>[2]</sup>. Among the various conditions that can induce chronic lymphedema are tumors, trauma, radiotherapy, obesity, hypothyroidism, heart failure, chronic venous stasis, chronic bacterial infections, and AIDS-related Kaposi's sarcoma <sup>[1, 3]</sup>.

It is characterized by presenting skin with hyperkeratosis, papillomatosis, and verrucous hyperplasia, which gives it a cobblestone appearance, which can progress to ulceration and infection by bacteria and fungi which, in turn, predisposes to cellulitis <sup>[2]</sup>. Treating the underlying causes is crucial. Local

management options include manual lymphatic drainage, low elasticity bandages, custom elastic containment garments, and intermittent sequential pneumatic pressotherapy. In some cases, oral or topical retinoids, topical keratolytic, and  $CO_2$  laser have been used, reserving the surgical option for severe cases  $^{[1,2]}$ .

#### Conclusion

summary, Elephantiasis Nostras Verrucosa characterized by the prolonged accumulation of protein-rich interstitial fluid, leading to fibroblast proliferation, impaired local immune response, increased dermal fibrosis, and heightened susceptibility to infections. Chronic lymphedema, induced by various conditions such as tumors, trauma, and obesity, among others, exacerbates the condition. Its hallmark features include hyperkeratosis, papillomatosis, and verrucous hyperplasia, resulting in a cobblestone appearance of the skin, which may progress to ulceration and infection. Treatment strategies involve addressing underlying causes and employing local management options such as manual lymphatic drainage, compression therapy, and topical medications. Surgical intervention is reserved for severe cases.

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