

# A case of ischemic fasciitis associated with lower extremity prosthesis use



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## INTRODUCTION

Ischemic fasciitis is a rare pseudosarcomatous entity that occurs in deep subcutaneous tissue. We present a case that illustrates the rare incidence of ischemic fasciitis in the context of an unusual trigger. Health care providers should be aware of its potential occurrence in patients using prosthetics. Recognition and subsequent treatment can relieve pain that may occur due to wearing the prosthetic.

## CASE REPORT

A 61-year-old Caucasian male with a medical history significant for a double amputation presented with a painful subcutaneous swelling in his left lateral limb that was making the use of his motorized prosthetic very difficult. The patient denied any history of prolonged bed rest or immobility. Physical examination revealed a tender subcutaneous swelling localized to the left lateral limb. There was no erythema, ulceration, or pustular drainage from the lesion. Fig 1 highlights the lack of visual findings on the examination. Signs and symptoms of local infection were not appreciated on the examination.

With the suspicion of a foreign body, an 8-mm punch biopsy was done. Histopathologic assessment revealed the presence of granulation tissue infiltrating into a central zone of fat necrosis (Fig 2). Immunohistochemical analysis was positive for CD163, which is consistent with the presence of histiocytes. Positive findings for CD34 and smooth muscle actin additionally highlight the presence of capillary growth. These findings pointed to an



**Fig 1.** Clinical photograph shows the lack of ulceration or skin discoloration of the subcutaneous swelling.

ultimate diagnosis of ischemic fasciitis, also known as atypical decubital fibroplasia.

With the goal of relieving pain upon prosthesis use, the subcutaneous nodule was surgically excised. The patient was discharged without complications. He was initially able to regain use of his prosthesis without pain induced by the nodular lesion; however, at a 3-month follow-up appointment, he described difficulty tolerating his prosthesis. It was determined that the lesion had recurred, so a second excision was planned. The prosthetics department was consulted for possible prosthesis modification.

## DISCUSSION

Ischemic fasciitis is a rare pseudosarcomatous lesion that grows within deep subcutaneous tissue.<sup>1</sup> It often arises over bony protuberances secondary to a history of prolonged bed rest or immobility but can

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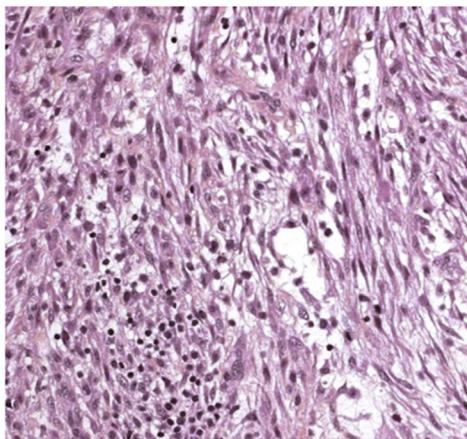
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**Fig 2.** Granulation tissue is seen infiltrating into a zone of fat necrosis (hematoxylin and eosin stain; original magnification:  $\times 10$ ).

also arise due to the use of prosthetics, as presented in this case. Predisposing risk factors include male sex and old age, although it can still present in almost any patient population.<sup>2</sup> The rarity of the disease makes it difficult to establish well-known risk factors.

The pathology associated with ischemic fasciitis is thought to arise from constant pressure caused by immobilization, resulting in ischemia that prompts the condition.<sup>3</sup> As the vasculature to the particular area becomes insufficient, tissue degeneration and fat necrosis ensue. This damage stimulates proliferation of fibroblasts and growth of capillaries to promote wound healing, ultimately forming a pseudosarcomatous, subcutaneous lesion.<sup>4</sup> Localized surgical excision of the nodule is often the first-line form

of treatment, with recurrence risk being very low if the instigating factors are addressed. Nevertheless, in the event that the lesion forms again, surgical excision is still the indicated form of treatment.<sup>5</sup>

Although ischemic fasciitis (atypical decubital fibroplasia) is a benign tumor, it is important to consider as a possible complication in patients using prosthetics. In such situations, the prosthesis can serve as an unusual trigger of ischemia and subsequent wound healing. Our hope in presenting this patient with ischemic fasciitis that occurred secondary to the use of motorized prosthetics is to highlight the rarity of this diagnosis in the context of lesser known causes and risk factors. In the event that a diagnosis of ischemic fasciitis is made, surgical excision of the lesion and careful monitoring for recurrence are both important to allow patients continued use of prosthetics without associated pain.

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