Successful treatment of complex lower extremity wounds with subcutaneous ossification in Heinz-Lippmann disease: Case Report.

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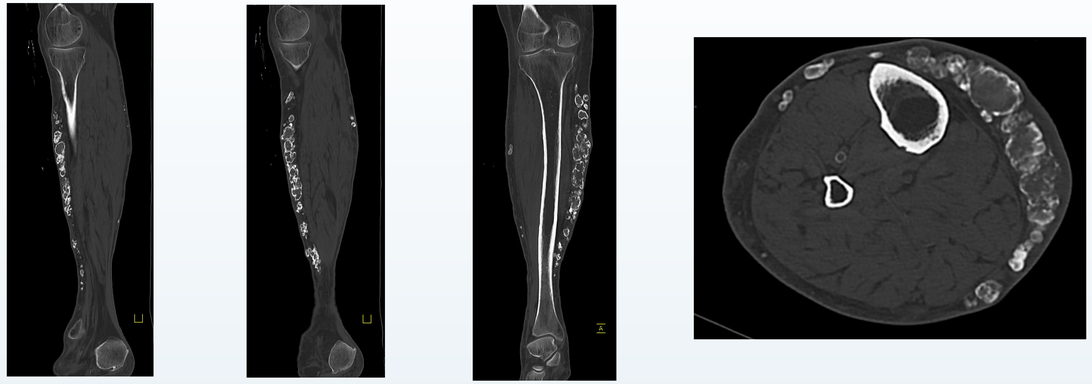
Introduction

Venous insufficiency and ulceration are frequently seen and managed in the wound care setting. Heterotrophic ossification, an abnormal bone formation in extra-skeletal soft tissues, is an underdiagnosed and underrecognized complication of chronic venous insufficiency leading to ulcer formation. The case presented highlights complicated wounds secondary to Heinz Lippmann disease and their successful treatment.

Methods

A 62-year-old female patient with medical history including diabetes, neuropathy, coronary artery disease, PAD, chronic venous hypertension, arterial calcification and bilateral foot ulcerations. The patient was initially seen as an inpatient due to cellulitis/osteomyelitis secondary from left foot ulceration and underwent partial 4th ray amputation for source control. Patient followed-up at wound care center where she also developed an anterior right tibia ulceration. Palpable masses were present. Patient underwent CT imaging, arterial and venous workup. The right anterior tibial ulceration was anesthetized and aggressively curetted to remove prominent heterotrophic bone until healthy granulating tissue was noted. Application of fish skin graft (FSG) was applied in the wound center.

Results



CT revealed extensive calcified masses in the subcutaneous tissues a circumferential pattern responding to venous varicosities throughout the lower leg. The individual lesions measure up to 2.5 cm in diameter and the appearance suggests heterotopic ossification rather than ordinary phleboliths, likely Heinz Lippmann disease.

Full thickness ulcerations that would probe 1.5 to 2 cm in depth. Localized erythema around calcified masses in the subcutaneous tissue.

Upon curette and excision of calcified masses, FSG was utilized to heal these deep ulcers. Note improvement in surrounding soft tissue appearance after recent application of skin substitute.

Ongoing epithelialization upon removal of calcified masses and application of FSG.

Discussion

Arterial studies revealed moderate calcification distally below the knee and occlusion of the left posterior tibial artery, status post directional atherectomy and balloon angioplasty to the left distal anterior tibial artery with good angiographic result. Venous studies revealed reflux of bilateral popliteal, great and superficial saphenous veins, for which the patient underwent EVLT procedures. Aggressive curetting of the lesion site as well as use of advanced adjunct therapies (revascularization procedures and application of fish skin grafts) in combination with conventional wound therapy achieved complete healing. The patient remains healed and ambulatory now.

Increased awareness of heterotrophic ossification as a cause of chronic ulceration with chronic venous insufficiency is important for accurate diagnosis and to initiate appropriate treatment. Advanced imaging modalities can help with the diagnosis of Heinz-Lippmann disease. Limited literature reports limited effectiveness with surgical debridement and skin grafts, however, this case highlights aggressive curette and removal of underlying bone deposition assist with healing difficult to treat ulcers.

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