Severe Frostbite in an Adult Male: A Case Report

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Introduction

- Frostbite: localized tissue necrosis caused by prolonged exposure to freezing temperatures
- P: No permanent tissue to severe tissue damage
- Case: 66-year-old man with venous stasis ulcers

References

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Case Presentation

A 66-year-old male with a 50-pack-year smoking history and a past medical history of diabetes mellitus, coronary artery disease, and hyperlipidemia presented to the emergency department with swelling and discomfort in the left lower extremity. He had been receiving regular wound care for lower extremity venous stasis for the past couple months. Prior to symptom onset, he had run out of his Enoxaparin (factor Xa inhibitor) and switched to using Warfarin for 5 days. Physical examination noted the left hallux and second digit as having blackened soft eschar. His feet were malodorous and erythematous with decreased lower extremity pulses bilaterally. Lab results were significant for WBC 13.7, aPTT 54.3, PT 41.9, INR 4.3, and CRP 4.7. Further workup and imaging were consistent with normal right and borderline left ankle-brachial indices and abnormal biphasic and monophasic waveforms from the mid-to-distal lower extremity. His CT angiogram of the lower extremities found occlusion of the right internal iliac artery and left tibial artery. MRI confirmed osteomyelitis. During his admission, his pain continued to worsen despite antibiotic and analgesic treatment which unfortunately led to amputation of his left hallux and second digit.

Discussion

- 83.1% of all cold-related injuries from 2021-2022
- 2016-2018: 1 in 100,000 people experienced frostbite
- RF: environmental temperatures, fat/muscle mass, age,
- Highly prevalent in the homeless
- Mechanism: vasoconstriction
- Downstream effects: ulceration, necrosis, and amputation
- Acute Treatment: aims to reverse vasoconstriction (antithrombotics, vasodilators)

Conclusion

- Prevention is Key!