

# Case study: Calciphylaxis in hemodialysis patient- prevention of mortality

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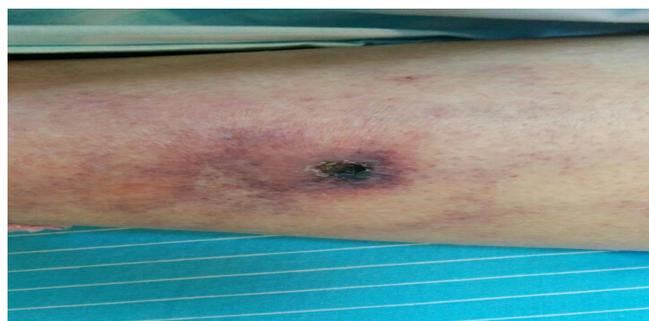
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## Introduction

- Calciphylaxis is an uncommon and severe disease which appears mainly in patients with chronic renal insufficiency undergoing dialysis
- It is a small vessel vasculopathy characterized by soft tissue ischemia and necrosis owing to calcium deposition in the medial layer of subcutaneous arterioles and associated with high mortality (45-80%)
- Epidemiological studies have unveiled a variety of risk factors for calciphylaxis, which include female sex, white race, obesity, diabetes, elevated calcium-phosphate product, decreased albumin level, warfarin use, vitamin D administration, decreased albumin level, etc.
- Patients experience marked pain, recurrent infections and constant risk of secondary sepsis

## Case report

- Our case, a 66-year-old woman, presented with 2-months history of painful and necrotic ulcers in her left shin
- Cutaneous biopsy showed extensive calcification of the tunica media of small-medium sized dermal and subcutaneous arterioles
- Her medical history included diabetes mellitus type II, hypertension, obesity, hemodialysis since 11/2014, atrial fibrillation treated with warfarin, decreased albumin, elevated phosphorus level, hyperparathyroidism and chronic heart failure.
- Our management of calciphylaxis involved:
- Wound care and pain control
- Discontinuation of warfarin
- Commencement of low molecular weight heparin
- Promotion of normalization of calcium- phosphorus and parathyroid hormone metabolism
- Simultaneously, intravenous sodium thiosulfate at standard dose during 8 months
- Pain improved within several weeks and the ulcers healed within nine months



A



B



C

Figure1 The serial changes in the skin ulcers before and after the combined medical treatment. A: On admission  
B: Three weeks after admission C: Nine months after treatment initiation

## Conclusion

- Treatment of calciphylaxis remains challenging
- We achieved good results with improvement of pain and slow healing of ulcerations over a period, as described in the literature
- This work is designed to help nursing staff identify the signs and symptoms of the disease, risk factors and accepted treatments
- Early detection of the manifestation, working with a multi-disciplinary team and persistence in treatment can improve the survival of patients who developed calciphylaxis