

Authors: Naif Hindosh MD, Rand Hindosh MD, Bolanle Dada MD. Department of Internal Medicine, St. Luke's University health Network – Anderson Campus

Introduction

Penile calciphylaxis, also known as calcific uremic arteriopathy of the penile arteries, is an extremely rare condition occurring in patients with end stage renal disease (ESRD) with secondary hyperparathyroidism and Diabetes Mellitus. It is characterized by medial calcification with intimal hypertrophy, fibrosis, and thrombosis of small vessels.

Case Presentation

A 77-year-old male with past medical history significant for systolic congestive heart failure, type 2 diabetes mellitus, ESRD on hemodialysis, presented with a 1week history of painful necrotic penile ulcers. Physical exam showed a dry, tender, necrotic ulcer over the anterior aspect of the penile shaft, with two additional small ulcers noted medially. History and workup were negative for sexually transmitted infections. Labs notable for Calcium 9.3 mg/dL, Phosphate 5.9 mg/dL, PTH 550.8 pg/mL. Biopsy of the ulcers showed vascular calcifications typical of calciphylaxis present in the deep reticular dermis and subcutis. He subsequently underwent partial penectomy after failing conservative measures with wound care, pain control and antibiotics.

Discussion

There remains controversy regarding medical versus surgical treatment for penile calciphylaxis. Surgical options include wound debridement or penile amputation while principal aspects of medical treatment include pain control, wound care and limiting inciting factors. Medications used for this condition include sodium thiosulfate, calcimimetics and bisphosphonates, although their efficacy remains undetermined. The management in our patient consisted initially of analgesia, antibiotics, cinacalcet (Sensipar) and local wound care. He subsequently underwent a partial penectomy which unfortunately did not show a major benefit as his symptoms persisted. He was ultimately transitioned to hospice care. There is a continued need for further research regarding other potential treatment modalities for patients presenting with penile calciphylaxis.

Conclusion

Considering the poor prognosis of penile calciphylaxis, the objective of treatment should focus on improving life quality until more data is available to establish a management guideline for this condition. A multidisciplinary team including urologists, surgeons, nephrologists, and palliative care should be involved to organize and coordinate health and care services to achieve this goal.