



Overconsumption of tums, an unexpected cause of calciphylaxis in a reconstructed breast: a case report

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Abstract: Calciphylaxis is a rare syndrome where vascular calcifications lead to microvessel occlusion and the development of painful, ischemic skin lesions. Herein, we present a case of an otherwise healthy female with skin necrosis that developed after a nipple sparing mastectomy (NSM) who subsequently received a diagnosis of calciphylaxis with unclear etiology. A 63-year-old Caucasian female presented to our institution for care after being diagnosed with a stage IIA, triple negative inflammatory ductal carcinoma of the right breast. The patient seen in clinic 1 week after surgery and necrosis of the inferior aspect of the breast was noted with marginal blood flow below the nipple. Local wound care was continued and 10 days later, necrotic tissue was excised and sent for pathology. The pathology report returned as calciphylaxis. On subsequent discussion with the patient, she admitted to consuming approximately a bottle of tums (calcium carbonate) per day for reflux. While she was usually borderline hypercalcemic, her calcium level pre-operatively was only 10.5. We hope this report encourages surgeons to consider a diagnosis of calciphylaxis in individuals, even without obvious risk factors, with otherwise unexpected tissue necrosis.

Keywords: Anaplastic large cell lymphoma; non-Hodgkin lymphoma; breast cancer; breast reconstruction; mastectomy

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Introduction

Calciphylaxis is a rare syndrome where vascular calcifications lead to microvessel occlusion and the development of painful, ischemic skin lesions. The pathogenesis of calciphylaxis has yet to be elucidated. It appears that calcified microvessels lead to low-grade ischemia and endothelial injury which causes further vessel occlusion and tissue infarction (1). Once calciphylaxis has been diagnosed, the prognosis is generally poor. However, this is somewhat confounded as this disease entity is often associated with other serious co-morbidities (2-4). Herein, we present a case of an otherwise healthy female with skin necrosis that developed after a nipple sparing mastectomy (NSM) who subsequently received a diagnosis of calciphylaxis with unclear etiology. We present the following case in accordance with the CARE Guideline.

Case presentation

A 63-year-old Caucasian female presented to our institution for care after being diagnosed with a stage IIA, triple negative inflammatory ductal carcinoma of the right breast. She desired a NSM with reconstruction. She was otherwise healthy except for a history of a lab band procedure which had resulted in a 30-pound (13.6 kg) weight loss. She was a non-smoker and her body mass index (BMI) was 23.17. Her breast size was a 38D with grade III ptosis, a sternal notch to nipple of 28 and 27.5 cm and an inframammary fold (IMF) to nipple of 10 and 11 cm for the right and left sides, respectively. A NSM with sentinel node was performed without complication and a 520 cc tissue expander was placed in the pre-pectoral position with total acellular dermal matrix coverage (264 cm²). Post-operative wound care was performed with daily Silvadene per surgeon

preference. The patient seen in clinic 1 week after surgery and necrosis of the inferior aspect of the breast was noted with marginal blood flow below the nipple. Local wound care was continued and 10 days later, a 3×4 cm area of necrotic tissue was excised and sent for pathology. The wound was closed primarily in layers. The pathology report returned as calciphylaxis. On subsequent discussion with the patient, she admitted to consuming approximately a bottle of tums (calcium carbonate) per day for reflux. She was also taking multiple prescription drugs for reflux. While she was usually borderline hypercalcemic, her calcium level pre-operatively was only 10.5. She continues to heal without any further issues and has started chemotherapy.

Discussion

While calciphylaxis is most commonly associated with end-stage renal disease (ESRD) or other kidney diseases, it has also been diagnosed in patients with normal kidney function (3). Other suggested risk factors include obesity, diabetes, female sex and rapid weight loss (5). The only known risk factors our patient had were female sex and rapid weight loss, albeit only thirty pounds over a protracted time period. Despite having prior surgical procedures in the past, this was her first issue with wound healing. She did not have a history of blood clotting disorders, which can be associated with hypercalcemia. Her calcium levels will be monitored after a reduction in consumption of Tums to confirm this was the causation of her hypercalcemia prior to pursuing additional medical work-up. While calciphylaxis is a rare disease typically associated with other co-morbidities, it can also be diagnosed in healthy individuals. We hope this report encourages surgeons to consider a diagnosis of calciphylaxis in individuals, even without obvious risk factors, with otherwise unexpected tissue necrosis.

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Footnote

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Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. All procedures performed in studies involving human participants were in accordance with the Declaration of Helsinki (as revised in 2013). Our institution does not require consent for a case report of one patient.

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