Calciphylaxis of the breast: a rare metabolic complication of kidney disease

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Accepted 26 July 2016

DESCRIPTION

Calcific uraemic arteriolopathy (CUA) or calciphylaxis affects 1–4% of the population with end stage renal disease (ESRD) and associated with high mortality. Most lesions (90%) occur on the lower extremities followed by the lower abdomen. We report a severe case of CUA in an uncommon location—the breasts.

A 54-year-old Caucasian woman with end stage kidney disease secondary to diabetic nephropathy, on maintenance haemodialysis for a year, was admitted with painful, open wound of the right breast. The initial lesion was a tender nodule which progressed to open wound with surrounding redness and intense pain over a 3-month period. The patient also noticed similar tender nodule in the left breast a few months later. Physical examination revealed eschar lesion over the medial superior right breast with a 1 cm deep area of tunnelling, firmness and induration underlying this area with surrounding erythema. (A) The left breast revealed erythema and a subcutaneous nodule on the medial aspect with no open lesions. (B) Laboratory data were significant for haemoglobin 10 g/dL, erythrocyte sedimentation rate 96 mm/hour, serum creatinine of 5.6 mg/dL, phosphate 6.2 mg/dL, parathyroid hormone 340 pg/mL, albumin 2.8 g/dL and alkaline phosphatase of 186 U/L. Mammogram demonstrated extensive vascular calcifications and scattered microcalcifications in breasts (figure 1).

Punch biopsy of the lesion showed skin and subcutaneous tissue with mild acute and chronic inflammation, fibrosis and focal necrosis. Focal calcium deposition was seen within a small blood vessel. Findings were compatible with the diagnosis of CUA. Therapy, including sodium thiosulfate with dialysis, was initiated and warfarin was discontinued. Lesions showed improvement at 1 month follow-up visit.

Learning points

▸ High index of suspicion required for diagnosis of calcific uraemic arteriolopathy (CUA) in atypical locations in dialysis patients.
▸ High calcium-phosphate product, elevated parathyroid hormone, hypoalbuminaemia, diabetes, obesity, warfarin use, female sex and protein C or S deficiency are among the risk factors for CUA.2
▸ Prompt and aggressive treatments with sodium thiosulfate,3 adequate dialysis, nutrition support and supportive care are important to reduce the morbidity and mortality of this once uniformly fatal disease.

REFERENCES
