Calcinosis in Adult-Onset Dermatomyositis: Metastatic or Dystrophic?

Barry Ladizinski, MD¹, Ali Khan, MD, MPP², and Christopher Sankey, MD²

¹Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA; ²Department of Internal Medicine Yale School of Medicine, New Haven, CT, USA.

KEY WORDS: calcinosis; dermatomyositis; leukocytoclastic vasculitis; hypercalcemia; lymphoma.

Abbreviations

PTH Parathyroid hormone

J Gen Intern Med 29(1):246–7

DOI: 10.1007/s11606-013-2564-4

© Society of General Internal Medicine 2013

Figure 1. Chest radiograph, demonstrating diffuse subcutaneous and muscular calcifications in the shoulders (arrows).

Notes All authors had access to the data and participated equally in the drafting of this manuscript.

This manuscript has not been previously published and is not under consideration in the same or substantially similar form in any other peer-reviewed media.

Received October 11, 2012

Revised February 26, 2013

Accepted July 15, 2013

Published online August 14, 2013

Figure 2. Computed tomography scan of the abdomen, demonstrating a 9-cm retroperitoneal lymphoma (arrows).

An 89-year-old woman with adult-onset dermatomyositis presented with fatigue, abdominal pain, and leg swelling for two weeks. Physical examination revealed a tender, distended abdomen and lower extremities with pitting edema and purpuric lesions suggestive of leukocytoclastic vasculitis. Laboratory investigation revealed an elevated corrected calcium level (12.7 mg/dl), elevated 1,25 dihydroxyvitamin D (120 pg/ml) and parathyroid hormone (PTH) at the upper limits of normal (22 nLEq/ml); PTH-related protein and phosphorus levels were normal. Chest radiography demonstrated extensive subcutaneous and muscular calcifications, most prominent in the shoulders (Fig. 1). Computed tomography of the abdomen showed a 9-cm retroperitoneal mass (Fig. 2), ultimately diagnosed as B-cell lymphoma. The patient passed away in the hospital while awaiting hospice arrangements.

Our patient's deep tissue calcium deposition was consistent with *metastatic calcinosis*, which occurs in normal tissue secondary to elevated serum calcium levels.¹ In this case, hypercalcemia was predominantly mediated by increased extrarenal production of 1,25-dihydroxyvitamin D (calcitriol) by malignant lymphocytes.^{1,2} The lack of complete PTH suppression suggests a degree of parathyroid autonomy, which was not felt to be significant. By contrast, the calcinosis typical of dermatomyositis, *dystrophic calcinosis*, occurs in damaged tissue in the setting of

normal calcium levels, and is rare in adult-onset dermatomyositis.^{3,4}

Conflict of Interest: *The authors declare that they do not have any conflicts of interest.*

Corresponding Author: *Barry Ladizinski, MD; Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA (e-mail: barryladizinski@gmail.com).*

REFERENCES

1. **Rosenthal, et al.** Elevations in circulating 1,25-dihydroxyvitamin D in three patients with lymphoma-associated hypercalcemia. *J Clin Endocrinol Metab.* 1985;60(1):29–33.
2. **Seymour JF, Gagel RF.** Calcitriol: the major humoral mediator of hypercalcemia in Hodgkin's disease and non-Hodgkin's lymphomas. *Blood.* 1993;82(5):1383–94.
3. **Mine, et al.** Metastatic calcification associated with malignancy. *Gan No Rinsho.* 1988;34(15):2044–51.
4. **Kavala, et al.** An extremely severe case of cutaneous calcinosis complicating adult dermatomyositis. *Clin Exp Dermatol.* 2009;34(1):115–6.