Stress Can Make Patients Crabby

Reema M. Vaze MD

Gregory R. Varghese DO

Mohammad Saqib MD

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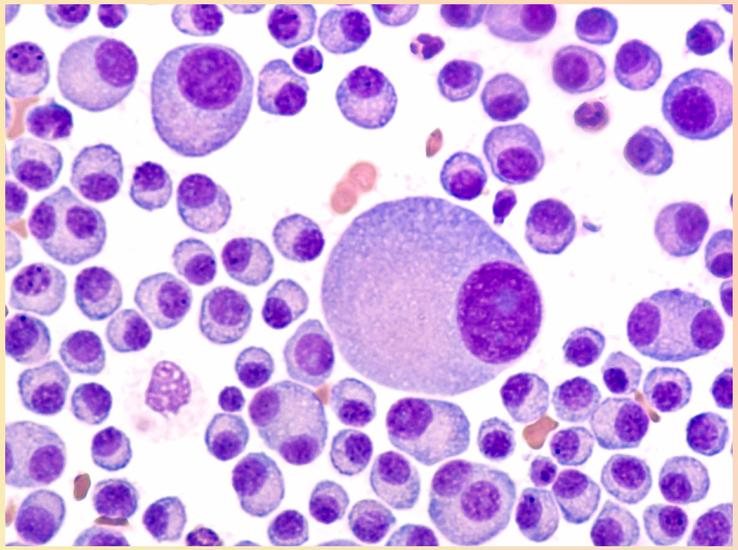
Reema Vaze, MD, Gregory Varghese, DO and Mohammad N. Saqib, MD

Lehigh Valley Health Network, Allentown, PA

Introduction

Multiple myeloma (MM) is a plasma cell malignancy defined by a serum monoclonal spike >3 g/dL or more than 10% clonal plasma cells (PCs) in the bone marrow. Typically, MM presents with other features including hypercalcemia, renal failure, anemia, and bone lesions (the CRAB criteria) which are used for diagnostic evaluation. Rarely, patients can present with a singular symptom. Our case describes a patient with an acute and sudden presentation of multiple myeloma in a span of a few weeks after surgery.



Case Description

A 71-year-old female with a past medical history of osteoporosis and osteoarthritis presented to the hospital with complaints of confusion, urinary retention and weight gain. Three weeks prior to this, the patient underwent a right total hip arthroplasty for her osteoarthritis. Lab values at that time were normal including creatinine (Cr) and electrolytes. After the surgery, the patient had difficulty with urination which prompted her return to the hospital. Lab values on admission were significant for a Cr of 10.4 (baseline 0.66) mg/dL, potassium of 6.1 mmol/L, sodium of 110 mmol/L and new anemia with a hemoglobin of 9.8 g/dL. A renal ultrasound showed no evidence of obstruction or hydronephrosis. The patient continued to be oliguric despite fluid resuscitation and she was started on renal replacement therapy. There was no clear etiology for the patient's acute renal failure as there was no evidence of post-op NSAID use, hypotension or other renal insults. Free light chains were ordered which revealed kappa free light chains >4000 with a kappa/lambda ratio of 1,400. The patient underwent bone marrow biopsy which showed >20% clonal PCs. The diagnosis of multiple myeloma was made and the patient was started on bortezomib.

It is important to consider multiple myeloma in the differential in patients >50 years old who present with acute renal failure after a stressor without evidence of another etiology.

Discussion

Multiple myeloma, can present with renal failure however it typically has other features. In our patient, renal failure was the only presenting symptom and more perplexing was the sudden onset of her symptoms. One study theorizes there are different phases of MM including the MGUS phase where there is <10% clonal PCs, the smoldering myeloma phase with >10% clonal PCs without CRAB features and the myeloma phase with >10% clonal PCs with CRAB criteria. It further theorizes that the release of IL-6, often released in times of stress and inflammation, can cause progression into the next phase.

In regards to our patient, it is possible that she had underlying smoldering myeloma and the acute stress of her joint replacement allowed the progression of her disease. Additionally, IL-6 is released from bone and has been associated with osteoporosis as seen in our patient. Therefore, it is important to consider multiple myeloma in the differential in patients >50 years old who present with acute renal failure after a stressor without evidence of another etiology.

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