

An Unfortunate Case of Acute Blast Crisis and the Impact of Leukostasis on Morbidity

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Abstract

Introduction: Blast crisis is an entity seen in both acute and chronic myeloid leukemia. It can be related to the phenomena of hyperleukocytosis and leukostasis, both potentially life-threatening conditions. Hyperleukocytosis is arbitrarily defined as a WBC greater than 100,000/uL; it is widely accepted that the most severe of symptoms occur with WBC at or greater than this value, although severe symptoms can still occur with WBC of only 50,000/uL. An important distinction exists between AML and CLL, as patients with CLL can have WBC elevation greater than 500,000/uL without any appreciable symptoms. This is related directly to the chronic, indolent nature of the disease course in CLL and the lack of acute, cytotoxic cytokine release that is seen in episodes of acute blast crises related to myelocytic or lymphocytic leukemia. The incidence of the phenomenon is not insignificant, with ranges from 5-13% seen in AML and 10-30% in ALL.

Case Description: This case describes a 78 year-old female, PMH significant for CAD, HTN and T2DM who presented to the ER with complaints of progressively worsening malaise for the preceding two days. Of note, patient spoke a specific dialect of Mandarin that was unknown to the translator; this made history taking of little use. Family members were present at bedside and provided the ancillary history. The patient had been on a tour of the United States over the prior week before hospital admission. Her travels had taken her to San Francisco (5 days prior to hospital admission) and Las Vegas (2 days prior to admission). The patient had actually been seen in a homeopathic clinic in Chinatown, San Francisco wherein she was prescribed an unspecified medication for a described “cold and lung infection.” Per her family relations, this medication temporarily improved her feelings of malaise. While in Las Vegas, the patient was noted to have difficulty with ambulation secondary to excessive weakness. The day immediately before admission, the patient was noted to be diaphoretic, dyspneic and significantly agitated.

Biography:

Ajayi completed his MD degree at Howard University College of Medicine and is currently completing his Hospice and Palliative Care fellowship in Aventura, Florida.

Dr. Cañizares-Otero completed her MD degree at St George's University School of Medicine is currently completing her Internal Medicine residency program in Aventura, Florida. She is interested in pursuing pulmonary-critical care fellowship.