

## **Title: To Care and Not to Cure, in a Hearty Blast Crisis**

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### **Introduction:**

Goals of care discussions allow for shared decision-making and encourage advance care planning. These should be initiated early for patients who may be at risk for an invasive procedure or have poor prognosis. It is estimated that 1/3 of patients with a full code order do not want CPR. Acute Blast Crisis (ABC) results from rapid expansion and differentiation of myeloid or lymphoid cells. Consequently, there is an increased risk of ischemia and bleeding due to hypercoagulability. In ST-elevation myocardial infarction (STEMI), ischemia results due to acute occlusion in the coronary vessels. Patients are emergently taken to the Cath lab for percutaneous coronary intervention (PCI). We presented a case of ABC and STEMI with multiple cardiac arrests and the need for goals of care clarification.

### **Case Presentation:**

A 71-year-old female with a past medical history of obesity, hypertension, hyperlipidemia, and thyroidectomy for multinodular goiter presented to the ED with nausea, brown-colored emesis, upper abdominal pain, diaphoresis, and myalgias for a few days. In the ED, she was acutely ill appearing with hypotension and abdominal tenderness on exam. Labs were significant for potassium of 2.8, creatinine of 2.05, WBC of 236K with 5% neutrophils, Hgb of 11, and platelets of 71. Peripheral smear showed smudge cells. Her ABG showed acidosis with pH <6.831 and lactate acid of >24.9. High sensitivity Troponin was elevated at 837. ECG showed inferior ST elevations and atrial fibrillation with RVR. Interventional Cardiology evaluated the patient; however, she was unstable for PCI and not a candidate for tPA given frank blood noted from her OG tube. Oncology recommended supportive care and stabilization of the patient. The patient had a seizure followed by cardiac arrest. She was intubated, and ROSC was achieved. She suffered an additional second cardiac arrest while in the ED. The patient continued to deteriorate and remained hypotensive despite three pressors. Critical care was consulted for admission during a brief period of hemodynamic stabilization. While the patient was still in the ED, she had a third cardiac arrest due to asystole. Her poor prognosis was discussed with her family, and her family made the decision to stop resuscitation efforts. The patient subsequently passed away.

### **Discussion:**

ABC occurs in 10-15% of patients with chronic myeloid leukemia (CML). Prognosis with blast crisis directly correlates with the number of blast cells, with greater than 30% blasts having increased morbidity and mortality. Before presentation to the ED, our patient had no known history of coronary artery disease or CML. She presented amid an ABC and STEMI complicated by gastrointestinal bleeding, resulting in multiple cardiac arrests. Given her concurrent presentation with life-threatening conditions and hemodynamic instability, the patient carried a grim prognosis with irreversible causes. Goals of care conversations earlier in the ED course may not always be possible given the lack of established diagnosis.

### **Conclusion:**

We recommend timely discussions with the family in situations where death might be imminent and addressing code status while the patient can still participate actively in the discussion.