
View Abstract

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TITLE: A fatal case of septic shock caused by *Acinetobacter* bacteremia acquired from a platelet transfusion

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ABSTRACT BODY:

Learning Objective #1: Prompt initiation of broad spectrum antibiotic therapy is essential in suspected septic transfusion reactions

Learning Objective #2: Septic transfusion reactions are most commonly associated with platelet transfusion

Case: A 67 year old male with a history of type II diabetes and alcoholic cirrhosis was admitted for medical optimization prior to a transarterial chemoembolization procedure for recently diagnosed hepatocellular carcinoma. The patient was feeling well at the time of admission. Admission vitals were unremarkable and his labs were notable only for chronic thrombocytopenia.

In anticipation of his upcoming procedure, two units of platelets were ordered. Shortly after initiation of the first platelet transfusion, the patient complained of chills and was noted to have a temperature of 100.8°F. The transfusion was stopped and the patient was administered acetaminophen and diphenhydramine. Approximately 1 hour later, the patient developed tachycardia, tachypnea, and hypotension.

The patient was transferred to the intensive care unit where he was started on vasopressors and broad spectrum antibiotics. Within a few hours of admission to the ICU the patient developed severe disseminated intravascular coagulation (DIC). Blood cultures revealed *Acinetobacter* bacteremia. Cultures obtained from the unit of transfused platelets grew the same species of *Acinetobacter*. Antibiotic coverage was broadened to tobramycin and meropenem. Unfortunately, over the subsequent 24 hours, the patient's vasopressor requirements continued to rise. Given his clinical deterioration further aggressive treatment was felt to be unlikely to improve his condition. Aggressive care was withdrawn and the patient expired shortly after.

Impact/Discussion: Septic transfusion reactions caused by bacterial contamination of blood products have long been known to be a problem in transfusion medicine. The risk of a sepsis is highest with the transfusion of platelets due to storage at room temperature. Bacterial contamination rate of platelets is around 1 in 5000 transfusions, with a risk of transfusion associated sepsis around 1 in 100,000 transfusions. Death related to transfusion of contaminated platelets remains rare with only 10 fatalities reported by the Food and Drug Administration from 2012 to 2015.

Clinicians must be able to recognize the signs of a septic transfusion reaction which include fever, chills, hypotension, and DIC. It may be difficult to differentiate sepsis from other types of transfusion reactions such as acute hemolytic reactions. In order to assist with diagnosis, the blood bank should be contacted immediately so that proper laboratory testing can be performed, including ABO compatibility and culture of the transfused product. Administration of antibiotics should be considered in any decompensating post transfusion patient.

Conclusion: Septic transfusion reactions are a relatively rare but important complication of blood product administration that clinicians must be able to recognize.

CURRENT PRIMARY CATEGORY (REQUIRED): Infectious Diseases - V

Secondary Category - V2: Medication Related Complications - V2

Accuracy - V: I affirm

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