



Contamination of platelet concentrates (PCs) with *Staphylococcus aureus* is one of the most significant ongoing transfusion safety risks in developed countries” Loza-Correa et al (2017).

Abstract:

BACKGROUND: Contamination of platelet concentrates (PCs) with *Staphylococcus aureus* is one of the most significant ongoing transfusion safety risks in developed countries.

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CASE REPORT: This report describes a transfusion reaction in an elderly patient diagnosed with acute myeloid leukemia, transfused with a 4-day-old buffy coat PC through a central venous catheter. The transfusion was interrupted when a large fibrous clot in the PC obstructed infusion pump flow. Shortly afterward, a red blood cell (RBC) unit transfusion started. After septic symptoms were developed, the RBC transfusion was also interrupted. While the RBC unit tested negative for bacterial contamination, the PC and the patient samples were found to be contaminated with a *S. aureus* strain that exhibited the same phenotypic and genome sequencing profiles. The isolated *S. aureus* forms biofilms and produces the superantigen enterotoxin-like U, which was detected in a sample of the transfused PCs. The patient received posttransfusion antibiotic treatment and had her

original central line removed and replaced.

DISCUSSION: As the implicated PC had been tested for bacterial contamination during routine screening yielding negative results, this is a false-negative transfusion sepsis case. Using a point-of-care test could have prevented the transfusion reaction. This report highlights the increasing incidence of *S. aureus* as a major PC contaminant with grave clinical implications. Importantly, *S. aureus* is able to interact with platelet components resulting in visible changes in PCs.

CONCLUSION: Visual inspection of blood components before transfusion is an essential safety practice to interdict the transfusion of bacterially contaminated units.

Reference:

Loza-Correa, M., Kou, Y., Taha, M., Kalab, M., Ronholm, J., Schlievert, P.M., Cahill, M.P., Skeate, R., Cserti-Gazdewich, C. and Ramirez-Arcos, S. (2017) Septic transfusion case caused by a platelet pool with visible clotting due to contamination with *Staphylococcus aureus*. *Transfusion*. February 16th. .

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