

## Transfusion-transmitted bacterial infection as the source of *Staphylococcus aureus* bacteremia in patients with hematologic malignancies

Haematologica 2004; 89(3):e40

We read with great interest the paper by Venditti et al. about *Staphylococcus aureus* bacteremia (SAB) in patients with hematologic malignancies.<sup>1</sup> We'd like to point out that SAB in hematologic patients could be the consequence of a bacterial contamination of transfused blood components,<sup>2</sup> particularly when platelet transfusions are considered.<sup>3</sup> This is because the platelet units are stored at room temperature and they are mixed gently in a rotator device. Thus, bacteria find an excellent environment to survive. However, it is difficult to establish a platelet transfusion as a source of SAB in this group of patients. Two main reasons could explain this fact. First, clinical presentation is affected by concomitant factors. These factors can be summarized with the following acronym VICTIM (virulence of the bacteria, immune status of the recipient, concentration of bacteria transfused, timely recognition, intensity of patient monitoring, medicines the patient is receiving).<sup>4</sup> All these factors are present in patients reported by Venditti et al. and bacterial contamination of blood products as a source of SAB could have been under diagnosed.<sup>5,6</sup> Second, Gram-positive bacteria are frequently found in platelet units and blood donors' skin could be the origin of contamination because skin fragments can be drawn into the collection bag.<sup>7,8</sup> Thus, the isolation of *Staphylococcus* in the blood of a patient could be easily attributed to another origin such as the infection of an intravascular device. In fact, Venditti et al. reported unknown source, intravascular device and mucocutaneous infection of SAB in 72%,

10.5% and 17.5% of hematologic neutropenic patients, respectively.

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