Recent combat experience reignited interest in transfusing whole blood (WB) for patients with life-threatening bleeding” Spinella et al (2016).

Abstract:

Recent combat experience reignited interest in transfusing whole blood (WB) for patients with life-threatening bleeding. US Army data indicate that WB transfusion is associated with improved or comparable survival compared to resuscitation with blood components. These data complement randomized controlled trials that indicate that platelet (PLT)-containing blood products stored at 4°C have superior hemostatic function, based on reduced bleeding and improved functional measures of hemostasis, compared to PLT-containing blood products at 22°C.

WB is rarely available in civilian hospitals and as a result is rarely transfused for patients with hemorrhagic shock. Recent developments suggest that impediments to WB availability can be overcome, specifically the misconceptions that WB must be ABO specific, that WB cannot be leukoreduced and maintain PLTs, and finally that cold storage causes loss of PLT function. Data indicate that the use of low anti-A and anti-B titer group O WB is safe as a universal donor, WB can be leukoreduced with PLT-sparing filters, and WB stored at 4°C retains PLT function during 15 days of storage. The understanding that these perceived barriers are not insurmountable will improve the availability of WB and facilitate its use. In addition, there are logistic and economic advantages of WB-based resuscitation compared to component therapy for hemorrhagic shock. The use of low-titer group O WB stored for up to 15 days at 4°C merits further study to compare its efficacy and safety with current resuscitation approaches for all patients with life-threatening bleeding.

Reference:

Spinella, P.C., Pidcoe, H.F., Strandenes, G., Hervig, T., Fisher, A., Jenkins, D., Yazer, M.,

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