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Commentary
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Transfusion Ratio of Plasma to Packed Red Blood Cells Yields Better Outcomes in Both Trauma and Surgical Patients

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Commentary

In our prior meta-analysis, on the proper transfusion ratio of fresh frozen plasma (FFP): packed red blood cell (RBC) that included 16,607 patients from 36 studies, we found that lower ratio was associated with less 24-h and 30-day survival (OR=2.41, 95% CI=1.94-3.01 and OR= 1.74, 95% CI=1.51-2.02 respectively) with a ratio of 1:1.5 gave the best 24-hour and 30-day survival benefit (OR=0.25, 95% CI=0.09-0.73 and 0.43, 95% CI=0.19-0.88 respectively, $p < 0.001$) in trauma and non-trauma settings [1]. This results run in parallel with prior evidences by Borgeman et al [2] who found best benefit with transfusion ratio of 1:1.5.

The role of early balanced transfusion is most critical within the first few hours of admission as being reported in PROMMTT and PROPPR study with 24 hour is the cut-off period after which other factors start to affect survival [3,4].

The ratio was not associated with acute respiratory distress syndrome (ARDS; OR= 0.68, 95% CI=0.40-1.16) or acute lung injury (ALI; OR= 1.23, 95% CI= 0.81-1.86). The national implementation of balanced transfusion protocol was opposed by the concern of possible rise in transfusion-associated injuries, especially if patients were massively transfused [5]. However, our results run in parallel with prior randomized clinical trials (RCTs) that did not find influence of transfusion ratio on the incidence of ARDS or ALI (Figure 1) [4,6,7].

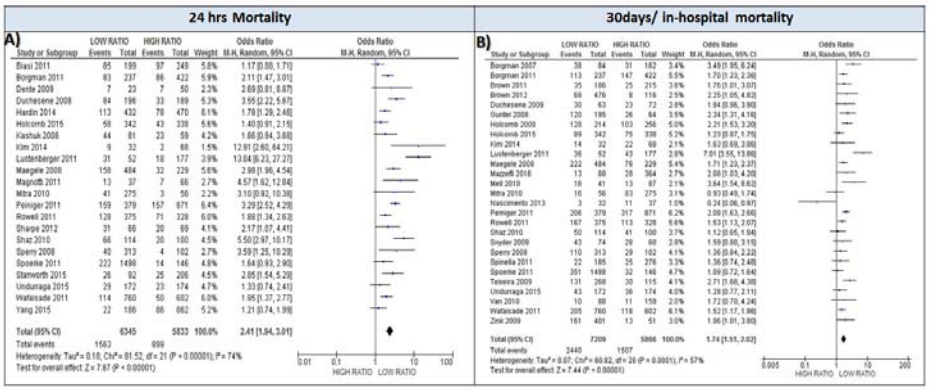

Figure 1:

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