Transfusion-related acute lung injury and potential risk factors among the elderly | 1

#IVTEAM #Intravenous literature: “Our study among the elderly suggests TRALI to be a severe event and identifies a substantially increased TRALI occurrence with greater number of units and with PLT- or plasma-containing transfusions.” Menis et al (2014).

Reference:


Abstract:

Background: Transfusion-related acute lung injury (TRALI) is a serious complication leading to pulmonary edema and respiratory failure. This study’s objective was to assess TRALI occurrence and potential risk factors among the inpatient US elderly Medicare beneficiaries, ages 65 and older, during 2007 through 2011.

Study Design and Methods: This retrospective claims-based study utilized large Medicare administrative databases. Transfusions were identified by recorded procedure and revenue center codes. TRALI was ascertained via ICD-9-CM diagnosis code. The study evaluated TRALI rates among the inpatient elderly overall and by calendar year, age, sex, race, blood components, and units transfused. Logistic regression analyses were used to assess potential
risk factors.

Results: Of 11,378,264 inpatient transfusion stays for elderly Medicare beneficiaries, 2556 had a recorded TRALI diagnosis code, an overall rate of 22.46 per 100,000 stays. TRALI rates were higher for platelet (PLT)- and plasma-containing transfusions and increased by year and number of units transfused (p < 0.0001). Significantly higher odds of TRALI were also found for persons ages 65 to 79 years versus more than 79 years (OR, 1.19; 95% confidence interval CI, 1.09-1.29), females versus males (OR, 1.26; 95% CI, 1.16-1.38), white versus nonwhite (OR, 1.43; 95% CI, 1.27-1.66), and with 6-month histories of postinflammatory pulmonary fibrosis (OR, 1.89; 95% CI, 1.52-2.20), tobacco use (OR, 1.16; 95% CI, 1.00-1.26), and other diseases.

Conclusion: Our study among the elderly suggests TRALI to be a severe event and identifies a substantially increased TRALI occurrence with greater number of units and with PLT- or plasma-containing transfusions. The study also suggests importance of underlying health conditions, prior recipient alloimmunization, and nonimmune mechanism in TRALI development among the elderly.

Other intravenous and vascular access resources that may be of interest (External links – IVTEAM has no responsibility for content).