



We hypothesized that elderly trauma patients would have lower admission hemoglobin (Hb) levels, higher transfusion rates, and worse outcomes than young trauma patients” Loftus et al (2018).

Abstract:

BACKGROUND: The natural history of postinjury among elderly trauma patients has not been well described. We hypothesized that elderly trauma patients would have lower admission hemoglobin (Hb) levels, higher transfusion rates, and worse outcomes than young trauma patients.

METHODS: We performed a propensity-matched retrospective cohort analysis comparing elderly (age ≥ 65 y) to young (age 18-64) trauma patients matched by sex, mechanism of injury, Injury Severity Score, base deficit, comorbidities, operative blood loss, and phlebotomy blood loss (n = 41/group). Outcomes included Hb trends, packed red blood cell (PRBC) transfusion, length of stay, and mortality.

RESULTS: Elderly patients had lower admission Hb (11.3 versus 10.2 g/dL, $P = 0.012$), received more PRBC transfusions within 24 h (3.6 versus 1.8 units, $P = 0.046$), and during admission (6.9 versus 4.3 units, $P = 0.008$). Despite receiving more PRBC transfusions and having similar operative and phlebotomy blood loss, elderly subjects had lower discharge Hb (9.0 versus 9.7 g/dL, $P = 0.013$). Elderly subjects had fewer ICU-free days (2.0 versus 6.0 d, $P < 0.001$) and higher in-hospital mortality (15% versus 0%, $P = 0.026$).

CONCLUSIONS: Elderly trauma patients had lower admission Hb, received more transfusions, and had persistently lower Hb on discharge when controlling for injury severity, comorbid conditions, and blood loss. Aging may have a negative impact on postinjury anaemia.

Reference:

Loftus, T.J., Brakenridge, S.C., Murphy, T.W., Nguyen, L.L., Moore, F.A., Efron, P.A. and Mohr, A.M. (2018) Anemia and blood transfusion in elderly trauma patients. *The Journal of Surgical Research*. 229, p.288-293.

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