**LESS IS MORE - RESTRICTIVE TRANSFUSION STRATEGY IN CORONARY ARTERY DISEASE PATIENTS RESULTS IN SHORTER LENGTH OF STAY**

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**Background:**Transfusion thresholds are evolving. With concerns over blood-borne pathogens and costs, this practice has been refined. Evidence exists to support more restrictive transfusion strategies in non-surgical/critical care patients. However, there is a lack of data regarding the impact of transfusions for those non-surgical/critical care patients with pre-existing coronary artery disease (CAD). We hypothesize no benefit of a liberal transfusion strategy in patients with CAD in terms of major adverse cardiovascular events (MACE).

**Method:** In a retrospective, observational study from 2013-2014, we identified 628 non-surgical/critical care patients with pre-existing CAD who were transfused leukoreduced red blood cells (LRBC). We excluded 226 patients with end stage renal disease. Patients were divided based upon a pre-transfusion hemoglobin of 8 g/dL. Differences in MACE, inpatient mortality, transfusion reactions and length of stay were examined. Using a margin of 10% to define equivalency, 90% confidence intervals (CI) for the differences and p-values for equivalency were computed via two one-sided tests (TOST). Differences in length of stay were evaluated via t-test.

**Results:** Of the 402 included patients, 220 (54.7%) were transfused at a hemoglobin level less than 8 g/dL (restrictive group) and 182 patients (45.3%) were transfused at a hemoglobin level equal to or above 8 g/dL (liberal group). MACE occurred in 7.7% in the restrictive group and 6.6% in the liberal group (90% CI: 1.10 (-3.9, 6.2), supportive of equivalence; TOST p < 0.001). Rates of inpatient mortality or transfusion reactions did not differ between groups. The restrictive group had a median length of stay of 8 days compared to patients in the liberal group with a median of 9 days (p = 0.01).

**Conclusion:**We demonstrated that a liberal transfusion strategy in patients with pre-existing CAD did not lead to an improvement in rates of MACE. In fact, patients who were transfused more liberally had a longer length of stay than those transfused more restrictively. This suggests that adopting a more restrictive transfusion strategy in non-surgical/critical care patients with CAD improves length of stay without an increase in MACE.