

CARDIOVASCULAR EVENTS AND MORTALITY IN CHRONIC KIDNEY DISEASE PATIENTS TREATED WITH EPOETIN ALFA OR DARBEPOETIN ALFA

Erdal Sarac, Victor Lossev, Donald J. Misquitta, Ali Dinani, and David Gemmel. Northeastern Ohio Universities College of Medicine,

Rootstown, Ohio and St. Elizabeth Health Center, Youngstown, Ohio,

USA. **Introduction:** Determining the ideal hemoglobin (HGB) range

in chronic kidney disease (CKD) patients on erythrocyte stimulating proteins (ESPs) may result in significant improvements in morbidity and mortality. Recent data suggests the need to monitor HGB to avoid cardiovascular events and mortality. We hypothesized that patients on ESPs with a HGB level ≥ 11 or < 12 g/dL will exhibit higher rate rates of cardiovascular events and mortality, compared to patients with HGB levels < 11.0 g/dL. **Methods:** A retrospective chart review (n=149) was conducted of CKD patients with anemia being treated with ESPs between 2000-2007. Charts from a private nephrology office were examined for HGB levels throughout the duration of treatment.

Hospital charts were reviewed for each cardiovascular event requiring admission and for mortality. Mean HGB levels were calculated for each patient. Patients were divided into groups, based on mean HGB levels, and mean, standard deviation, and student t tests were calculated to compare groups.

Results: No statistically significant difference in cardiovascular events requiring admission was observed between groups ($p=0.35$). Among patients with HGB < 11 g/dL (n=86), the average number of events was 0.28 ± 0.64 , compared to the average number of events among patients with HGB levels ≥ 11 or < 12 g/dL (n=63), 0.40 ± 0.83 . In addition, CKD patients with mean HGB of ≥ 11.0 or < 12 g/dL had lower all-cause mortality, 16%, compared to similar patients with mean HGB of < 11.0 g/dL, 33% ($p = 0.018$).

Discussion: These results support the need to monitor HGB levels and to dose ESPs to achieve HGB in a therapeutic range, 11-12 g/dL. Larger prospective trials in CKD patient populations are needed to confirm these findings.