

ROUTE OF EPOETIN ADMINISTRATION AND HEMOGLOBIN VARIABILITY IN HEMODIALYSIS PATIENTS

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Maintaining stable hemoglobin (Hgb) levels in HD patients is challenging and Hgb variability has been associated with adverse outcomes. Effect of route of epoetin administration on Hgb variability has not been well studied and hence we performed an analysis of a large randomized trial.

Data from an open-label, multi-center trial that compared IV to subcutaneous (SC) epoetin in 157 iron-replete HD subjects were used. The weight-based epoetin dosing algorithm was identical for both arms. 78 patients randomized to IV and 79 to SC who achieved a target Hgb of 10-11gm/dL in a 26 week maintenance phase were analyzed. Hgb variability was defined as number of times weekly Hgb was outside the range. Additional definitions were also examined.

Baseline covariates were similar in both arms except for the dose (lower in SC) and dialysis vintage (longer in IV). Mean number of Hgb levels outside target range was higher in SC compared to IV (14.3 ± 4.6 vs. 12.80 ± 5.1 , $p=0.03$). In addition, standard deviation of weekly Hgb was greater in the SC group (0.83 ± 0.3 vs. 0.74 ± 0.2 , $p=0.01$).

The SC route had greater Hgb variability compared to IV route. This may reflect greater sensitivity and relatively larger dose changes in SC group. Careful consideration to the dosing algorithm is necessary to limit the degree of Hgb variability.