

EFFECTS OF VITAMIN D ON ESA REQUIREMENTS IN CKD STAGE 3-4

Yvette Shannon, Nadia Khambati, Paulynn Katsulis, Lumi Stutz, Louisa Ho and Stuart Sprague

Evanston Northwestern Healthcare, NUFSON, Evanston, IL

Vitamin D (25D) deficiency is very common among CKD. The benefits of achieving adequate 25D levels in CKD patients have not been established. Potential benefit of 25D replacement has included the management of bone and mineral disorders. In CKD 3, but not 4, a significant decrease in PTH has been demonstrated. Whether correcting 25D deficiency may have additional benefit has not been elucidated. Recent studies have suggested a possible ESA-sparing effect of ergocalciferol (Ergo) treatment in HD patients. Whether treatment of CKD patients will affect ESA requirements remains to be analyzed.

38 CKD 3 and 4 patients actively receiving ESA therapy for up to 6 months before beginning Ergo replacement were evaluated. Patients received Ergo; 50,000 IU weekly for 4-12 weeks and monthly thereafter. ESA dosing, as well as serum Ca, P, vitamin D, PTH, Hgb, % Fe saturation and ferritin were determined prior to and following Ergo treatment (21.76±6.99 v 22.32±5.03 wks, NS). No changes in eGFR, Ca, P or PTH levels. No change in Hgb, however, 67% of patients had a reduction in weekly ESA dose (p=0.057) with no change in % iron saturation or ferritin levels. There was a significant increase in 25D into the adequate range.

	Pre Ergo	Post Ergo
Mean weeks	21.76 +/- 6.99	22.32 +/- 5.03
Avg EPO units/wk	6,033 +/- 3893	5,311 +/- 3940
25 D	21.46 +/- 11.20	34.43 +/- 11.57
PTH	125.89 +/- 73.26	141.17 +/- 99.71
Hgb	11.01 +/- 0.96	11.32 +/- 0.77
Percent saturation	19.42 +/- 7.68	22.33 +/- 15.53
Ferritin	293.63 +/- 256.50	293.56 +/- 318.18

Treatment of CKD patients with Ergo corrected underlying vitamin D deficiency and is associated with a trend to decreased weekly EPO doses while maintaining similar Hgb levels. This effect can not be attributed to improved iron stores, or differences in ferritin level.