البحث الثامن

" HEP-25/ERFE Ratio As A Substantial Prognostic Marker Of Erythropoiesis In Dialysis-Dependent Patients

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Abstract:

Background:

Anemia is one of the commonest clinical features of chronic kidney disease (CKD). Hepcidin (HEP), a key factor of iron metabolism, regulation in CKD is complex influenced by renal function, iron status, and inflammation. **Aims:** This study aimed to evaluate the correlations between serum erythropoietin (EPO), erythroferrone (ERFE) and hepcidin (HEP-25) levels, and the utility of HEP-25/ERFE ratio as a predictor of erythropoiesis activity.

Methods: This cohort study conducted on 35 patients with anemia related end stage CKD on sustained dose of short-acting erythropoiesis stimulating agent (ESA). Quantitative assessment of EPO, ERFE, and HEP in day zero, 5 and 7consequently after ESA injection was performed using ELISA technique. Erythropoiesis activity was monitored by noting the increment in reticulocyte parameters between baseline day zero and day7.

Results: Out of 35 dialysis-dependent patients, erythropoiesis outcomes were (54.3%) effective, (34.3%) ineffective and (11.4%) accelerated but ineffective. Though there was no significance difference in HEP/ERFE ratio and outcomesof erythropoiesis, the ratio was lower among those with effective than those with ineffective erythropoiesis.

Summary/Conclusion: Reticulocyte parameter (RET-He) is a substantial predictor of abnormal iron utility and effectiveness of erythropoiesis in patients with CKD rather than HEP-25/ERFE ratio. **Keywords:** Anemia, ESRD, HEP-25, ERFE, RET-He, ESA