

SAFE AND EFFECTIVE ADMINISTRATION OF EPOETIN ALFA IN ANEMIA OF SICKLE CELL DISEASE AND KIDNEY FAILURE

Fabio Aglieco, Beje Thomas, Wilner Samson, Andre Kaplan

University of Connecticut, Farmington, Connecticut

Sickle cell disease (SCD) in the setting of chronic kidney disease (CKD) is complicated by a lack of erythropoietin. The benefit of replenishing physiologic levels of erythropoietin must be weighed against the risk of precipitating a sickle cell crisis.

A 33 yo black female with SCD and end-stage renal disease presented with anemia and fatigue. The nadir HGB was 4.2 g/dl. Transfusion therapy was withheld due to incompatibility. Epoetin alfa was initiated at a dose of 40,000 units. The prescription ranged from 5,000 to 50,000 units every other week with a target HGB of 8 to 9 g/dl. Intravenous iron was provided as needed to maintain an iron saturation greater than 20%. Short-term follow up at eight months demonstrated a hemoglobin of 9.9 g/dl without any episodes of a sickle cell crisis.

The efficacy of ESA's in CKD has been well established while the safety and efficacy in SCD is unclear. Augmentation of HGB F production with ESA's in SCD is controversial. The goal in CKD is not to augment HGB F production but rather to provide physiologic levels of erythropoietin to maintain adequate HGB levels. With lower HGB targets (8-9 g/dl) and a less aggressive rise in HCT (1-2% per week), our experience suggests that epoetin alfa may be safely administered in patients with SCD and CKD. However, further evidence and long-term follow-up are necessary to establish the role of ESA's in these patients.