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Use of Erythropoiesis Stimulating Agent (ESA) in renal palliative care patients

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Introduction

Anemia is common in renal palliative care patients. Erythropoiesis Stimulating Agent (ESA) has been shown to correct anemia, decrease the number of hospital admissions and mortality in both predialysis Chronic Kidney Disease (CKD) patients and End Stage Renal Disease (ESRD) patients on dialysis. However, there is paucity evidence of ESA use in renal palliative care patients.

Objectives

to investigate the subsequent hemoglobin (Hb) level, number of hospital admissions, number of blood transfusions and accumulated death after 6 months of ESA use in ESRD patients not on dialysis.

Methodology

This was a retrospective cohort study of 2 groups of consecutive renal palliative care patients in Hong Kong West Cluster from April 2011 to January 2013. One was given ESA and the other group was not due to reasons of financial problem or refusal by patients. Inclusion criteria were renal palliative care patients with symptomatic anemia as documented in consultation note and those had used ESA for more than 1 month. Exclusion criteria included patients with anemia due to bleeding, active cancer or due to other causes of anemia.

Result

Totally, 69 patients were found to have symptomatic anemia during this period. 12 patients were excluded due to above reasons. There were 28 patients in control group while 29 patients in ESA group which consisted of Continuous Erythropoietin Receptor Activator (CERA) and darbepoetin alfa. For ESA group, the mean age was 81.14 years old (range 66-93). 59% of patients were female. Causes of ESRD were

due to diabetes mellitus (51.7%), glomerulonephritis (13.8%) and unknown causes (20 %). 24% patients were moderate ADL dependent or totally dependent. 48.3% and 27.6 % of patients have comorbidities of ischemic heart disease and stroke respectively. For the control group, they have similar demographic characteristics ($p > 0.05$). Baseline mean plasma creatinine level was 606.4 $\mu\text{mol/L}$ (SD=210.9) for ESA group and 607.6 $\mu\text{mol/L}$ (SD=285.2) for the control. Mean Hb was 7.5(SD=0.72) g/dL for ESA group and that was 7.8 (SD= 0.73) g/dL for control group. Median Hb was raised significantly after 3 months and 6 months of ESA injections (9.1 and 9.2 g/dL respectively, $p < 0.05$). Compared with control group , number of admissions per month and the death accumulated after 6 months of ESA injections were significantly reduced ($p = 0.014$ and $p = 0.022$ respectively). This study demonstrated encouraging results that use of ESA in renal palliative care patients was effective in raising Hb level, reducing number of admission and might have a survival benefit.