Epoetin beta vs. Micera® in maintaining haemoglobin in peritoneal dialysis patients

D. Guidozzi¹, G. Paget¹,², M. Davies¹,²

¹University of the Witwatersrand, Johannesburg, ²Division of Nephrology, Charlotte Maxeke Johannesburg Academic Hospital

Introduction

- It has been postulated that the use of an erythropoiesis stimulating agent (ESA) suitable for administration once a month such as Micera® (methoxy polyethylene glycol-epoetin beta) may facilitate improved rates of target haemoglobin (Hb) achievement and maintenance over epoetin beta in view of:
  - direct oversight of administration and the technique thereof
  - elimination of the need for special home storage requirements such as refrigeration
  - diminution of the need for individual patient compliance with regular subcutaneous administration in the home environment.
- Limited data regarding the use of the ideal erythropoiesis stimulating agent for peritoneal dialysis patients exists.

Methods

- A retrospective analysis was undertaken of a cohort of patients (n = 39) receiving continuous ambulatory peritoneal dialysis (CAPD) at our institution converted from epoetin beta (Recormon®) to Micera® (Roche pharmaceuticals)
- The monthly Hb was averaged for individual patients for the periods 1/1/2011 – 31/12/2011 (all patients receiving epoetin beta) and 1/5/2012 – 30/4/2013 (all patients receiving Micera®). The Student t-test was used to compare average Hb between the two periods.
- The monthly ESA dose was similarly averaged for individual patients in both treatment periods. The equivalent epoetin beta dose of Micera® was calculated for the period 1/5/2012 – 30/4/2013 (all patients receiving Micera®) and compared to the epoetin dose prescribed for the period 1/1/2011 – 31/12/2011 (all patients receiving epoetin beta) using the Student t-test.
- Factors which may have affected individual patient Hb and ESA dose requirement were compared between the two treatment periods. These included:
  - Iron status (ferritin, transferrin saturation)
  - Nutritional status (albumin)
  - HIV infection status
  - Other anaemia-inducing events (sepsis, haemorrhage/surgery, non-compliance with clinic attendance)

Conclusions

- There is no clear difference in the maintenance of Hb in peritoneal dialysis patients in our setting with the use of epoetin beta versus Micera®. (methoxy polyethylene glycol-epoetin beta)
- The decision regarding the optimal drug to use therefore can be based on other factors such as adverse effects, ease of use, availability and cost, although a prospective study to assess this topic more accurately would be beneficial.