

ONCE MONTHLY ADMINISTRATION OF METHOXY POLYETHYLENE GLYCOL-EPOETIN BETA (MIRCERA®) SIMPLIFIES THE ANAEMIA MANAGEMENT PATHWAY IN A SINGLE HAEMODIALYSIS UNIT PATIENT COHORT

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The adequate management of the anaemia of chronic kidney disease is both costly and time consuming. This is particularly true for patients undergoing unit-based haemodialysis who typically require higher doses, have more frequent administration than other patient groups to maintain haemoglobin levels in the target range. Despite 20 years of their use in routine clinical practice and latterly the development of longer-acting epoetins, the optimum strategy for epoetin administration remains a matter of some debate.

Mircera® (methoxy polyethylene glycol-epoetin beta), due to its extended serum half-life and prolonged duration of action, enables a once-monthly dosing schedule for most HD patients. When this is aligned with the standard monthly blood testing schedule for patients on HD it allows for this aspect of anaemia management to be reduced to 3 components each month: the measurement of the Hb level; the ordering of epoetin according to a simple treatment algorithm; and the once-only administration of epoetin. This in turn allows for a 'lean' approach to ordering and supply, with Mircera ordered only as required and does away with the need for stock holding and storage.

We undertook to investigate this in a single HD satellite unit. The patients were written to individually and were all in favour of once-monthly administration and the cessation of home delivery. The standard strategy for monthly blood testing was used, and the Hb levels and previous epoetin-beta doses were put into the following dose conversion algorithm:

Weekly dose of NeoRecormon®	Mircera® dose
<6,000 units	50 mcg
6,001-10,000 units	100 mcg
10,001-15,000 units	150 mcg
15,001u-24,000 units	200 mcg
20,001 – 25,000 units	250 mcg
25,000 units+	2 x 200 mcg (400 mcg dose split & given fortnightly)

Once converted, dose adjustments of 20% were made to maintain Hb levels within the desired target range of 11.0 – 12.5 g/dl.

55 out of 69 patients completed 6 months of Mircera, the other 14 having moved to other units for clinical reasons. The monthly mean and median Hb (g/dl) levels and Mircera doses (mcg) are shown below. There were 76 dose changes over the 6 months, a mean of 0.23 per patient month. 25 patients ended on a higher dose than starting, 20 patients on a lower dose, and for 10 patients no dose change was required.

Month	Baseline	1	2	3	4	5	6
Hb mean	11.27	11.19	11.27	11.17	11.30	11.69	11.37
Hb median	11.30	11.40	11.30	11.30	11.30	11.80	11.40
Mircera mean	109.1	109.6	103.8	114.2	121.3	120.1	113.0
Mircera median	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Switching from epoetin beta administered 2 – times weekly to once monthly has simplified the process of anaemia management in a single HD unit. No stock holding or storage was required with Mircera being ordered only as needed. There was no clear pattern to dose change requirements. Longer term trend analysis will be needed to determine if Mircera contributes to improved Hb stability in routine clinical practice.