CHILDRENS RENAL & UROLOGY UNIT QMC • NOTTINGHAM

Nottingham University Hospitals NHS Trust

Children's Renal and Urology Unit

Switch from NeoRecormon® (Epoetin Beta) Reco-Pen to Aranesp (Darbepoetin Alfa)® for Subcutaneous Use.

In light of the discontinuation of the NeoRecormon® Reco-Pen, it is necessary to switch patients currently using this product over to the Aranesp (Darbepoetin Alfa)® SureClick pen device. The paediatric dosing information for darbepoetin is summarised below. A table giving approximate equivalence between epoetin beta and darbepoetin alfa is included on page 2.

This information is only applicable to **subcutaneous** use of Epoetin Beta and Darbepoetin in Chronic Kidney Disease and Peritoneal Dialysis patients. Intravenous Epoetin Beta (NeoRecormon®) will continue to be used in Haemodialysis patients.

Children ≥11 years

Starting dose: 0.45micrograms/kg body weight once weekly by SC injection, ***or*** 0.75 micrograms/kg once every two weeks.

Dose Titration: Haemoglobin should be measured every one or two weeks until stable; thereafter can be measured less frequently.

Change in Haemoglobin	Recommended action
Increase <1g/dl in four weeks	Increase dose by approximately 25%. Dose increases must not be made more frequently than once every four weeks.
Increase >2g/dl in four weeks	Reduce dose by approximately 25%, depending on the rate of increase.
Haemoglobin >12 g/dl	Consider dose reduction. If haemoglobin continues to increase, reduce dose by approximately 25%.
Continues to increase, despite dose reduction	Withhold doses until haemoglobin begins to fall, at which point restart at approximately 25% lower than the previous dose.

Maintenance: Continue to administer as a single injection once weekly or once every two weeks. If target haemoglobin has been achieved with once every two week dosing, Aranesp may be administered subcutaneously once monthly using an initial dose equal to twice the previous once every two week dose. If necessary, doses can be adjusted as above. After any dose or schedule adjustment the haemoglobin should be monitored every one or two weeks. Dose changes in the maintenance phase of treatment should not be made more frequently than every two weeks.

Children aged 1-10 years

Starting dose: No guidance regarding starting doses in this age group is available. Patients should be initiated on Epoetin Beta and converted as below.

Converting from Epoetin Beta to Darbepoetin:

1 microgram of Darbepoetin is equivalent by 240 units of Epoetin Beta.

Thus the initial weekly paediatric dose of Darbepoetin (micrograms/week) can be determined by dividing the total weekly dose of Epoetin Beta (Units/week) by 240. Equivalent doses of Epoetin Beta for each strength of Aranesp (Darbepoetin Alfa)® SureClick pen are summarised overleaf. Darbepoetin doses <20 micrograms will need to be administered using a pre-filled syringe rather than the SureClick pen- see overleaf for more detail.

Because of individual variability, titration to optimal therapeutic doses is expected for individual patients- see above. When substituting Darbepoetin for Epoetin Beta, haemoglobin should be monitored every 1-2 weeks.

Equivalence between Epoetin Beta and Darbepoetin

Dose of Epoetin Beta	Corresponding Aranesp (Darbepoetin Alfa)® SureClick pen	Weight of patient based on 0.45microgram/kg Darbepoetin Alfa dose
600 units	*2.5 micrograms***	*5.5kg*
1, 2000 units	*5 micrograms***	*11kg*
2, 400 units	*10 micrograms***	*22 kg*
3, 600 units	*15 micrograms***	*33 kg*
4, 800 units	20 micrograms	44 kg
9, 600 units	40 micrograms	88 kg
14, 000 units	60 micrograms	
19, 200 units	80 micrograms	
24, 000 units	100 micrograms	
31, 200 units	130 micrograms	

****Doses <20micrograms will need to be administered using pre-filled syringes. The syringes are graduated as shown below:

Aranesp Pre-filled Syringe	Graduations
10 micrograms	2.5 micrograms
15 micrograms	5 micrograms
20 micrograms	4 micrograms
30 micrograms	10 micrograms
40 micrograms	10 micrograms
50 micrograms	10 micrograms
60 micrograms	20 micrograms
80 micrograms	20 micrograms
100 micrograms	20 micrograms
130 micrograms	20 micrograms
150 micrograms	50 micrograms

Written by: Andrew Wignell, Specialist Clinical Pharmacist (PICU/Paediatric Nephrology)
Checked by: Gemma George, Clinical Pharmacist.
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