CYCLOPHOSPHAMIDE 3.0g/m^2 FOR PBSC MOBILISATION

INDICATION: PBSC mobilisation

Prior to starting treatment:

- Medical review of fitness for chemotherapy – exclude active infection, major changes in organ function
- Check FBC, U&Es, creat
- Review calculated eGFR – do not use if <40ml/min
- Medical assessment – cardiac and respiratory function must be sufficient to undergo apheresis. ECG and echocardiogram or MUGA if there is a clinical suspicion of cardiac impairment
- Inform blood transfusion laboratory that further blood and platelet transfusions must be irradiated beginning from day -7 to completion of PBSC harvest
- Liaise with transplant CNS to ensure results of virology are known and NBS is aware of planned PBSC mobilisation. Note NBS demand the virology results checked in their own laboratories and may refuse to process the harvest if the results are not known.
- Ensure venous access is adequate for apheresis - central or femoral venous line has been arranged if necessary
- Written consent

Day 0	T –1hr	N saline 0.5L over 1hr
	T – 15mins	Mesna 1.6g/m^2 in 100ml N saline over 15mins
	T = 0	5-HT antagonist IV + dexamethasone phosphate 8mg IV
		CYCLOPHOSPHAMIDE 3.0g/m^2 in 1.0L N saline over 1 hour
	T +1hr	N saline 1.0L over 2hrs
	T +3hrs	Mesna 1.6g/m^2 in 100ml N saline over 15mins
		N saline 1.0L over 2hrs
	T +6hrs	Mesna 1.6g/m^2 in 100ml N saline over 15mins
		Or
		Mesna 3.2g/m^2 PO in 100ml orange juice/cola [a, b]

a. Mesna comes as 400mg & 600mg tablets b. If patient is vomiting give mesna IV

- Check urinalysis for haematuria with each urine
- If not vomiting allow home with 5-HT antagonist for 3 days
- Instruct patient to drink at least 3L fluid daily for next 3 days
- Instruct patient to return to ward if vomiting, frank haematuria, dysuria or fever
- If frank haematuria give additional mesna 1g, IV fluids and inform consultant

Day +5 Commence GCSF 10mcg/kg s.c od

GCSF must be given circa 18 00hrs and must be continued daily until harvesting is complete

Day +10 Start counting peripheral blood CD34 count when WBC > 1.0 x 10^9/L

If the target CD34 harvest count has not been reached after harvest on day +11 consider use of Plerixafor . This must be discussed with the consultant.

High Dose Cyclophosphamide Toxicities	
Neutropenic sepsis & thrombocytopenia	Nausea & vomiting (severe)
Alopecia	Haemorrhagic cystitis
Acute pulmonary toxicity (fever, cough, interstitial infiltrates) & pulmonary fibrosis	Acute cardiac toxicity – arrythmias & cardiac failure
Fever, chills, myalgia, bone pain, headache (GCSF)	Rash, injection-site reactions (GCSF)
Splenomegaly & splenic rupture (GCSF)	

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