UKALL 14 MAINTENANCE CHEMOTHERAPY

INDICATION: Consolidation for ALL patients on UKALL14 not having allogeneic transplant

Prior to treatment

- Check FBC – neutrophils must be > 1.0, platelets > 100
- Check U&Es, creat, LFTs and calculated GFR – see dose modifications if abnormal and *discuss with consultant*
- Written consent for course
- Maintenance therapy should be given for 2 full years
- Mercaptopurine is metabolized by the enzyme thiopurine methyltransferase (TPMT). Some individuals have lower levels of this enzyme and therefore enhanced sensitivity to the effects of mercaptopurine. This may result in significant cytopenias at the start of maintenance treatment.
- It is therefore recommended to start the maintenance treatment with weekly methotrexate alone and send a TPMT level (EDTA tube to biochemistry). Once this result is known, a decision regarding the starting dose of mercaptopurine can be made. Note that a reliable TPMT level cannot be made if there has been a blood transfusion in the last 2 – 3 months.

During the first 4 weeks

- Check FBC and LFTs weekly

Monitoring during treatment every 4 weeks

- Medical review of fitness for chemotherapy – exclude active infection, major changes in organ function
- Repeat FBC – see dose modifications
- U&Es, creat, LFTs monthly – more frequently if there is pre-existing liver dysfunction

Prior to intrathecal chemotherapy

- Check FBC - platelets must be > 50

Vincristine	1.4mg/m^2 * (max 2mg)	IV in 5omls N saline over 5 mins	Every 3 months
Prednisolone	60mg/m^2	PO daily	5 days every 3 months
Methotrexate	20mg/m^2	PO once a week	*(2.5mg tablets)*
Mercaptopurine	75mg/m^2	PO daily	*(50mg tablets)*
Methotrexate [a]	12.5mg	IT	Every 3 months

a. **NEVER GIVE INTRATHECAL CHEMOTHERAPY ON THE SAME DAY AS INTRAVENOUS CHEMOTHERAPY**

Dosing of maintenance therapy should be adjusted to maintain neutrophils between 0.75 and 1.5 x 10^9/, and platelet count between 75 & 150 x 10^9/.

- Dose of Mercaptopurine and Methotrexate should be altered in 25% increments or decrements to achieve the above counts. eg if neutrophils > 1.5 x 10^9/l, increase Mercaptopurine dose by 25%.
- If neutrophils remain > 1.5 x 10^9/l after 4 weeks, increase Methotrexate by 25% etc.
- There are no maximum doses of Mercaptopurine and Methotrexate.
- If neutrophils fall below 0.75 x 10^9/l, reduce both drugs by 50%.
- If neutrophils fall below 0.5 x 10^9/l, stop maintenance and restart at 100% when neutrophils > 0.75 x 10^9/l.
- Similar adjustments need to be made for the platelet count to maintain above counts.

Other medications

NEVER GIVE ALLOPURINOL WITH MAINTENANCE CHEMOTHERAPY

Cotrimoxazole 480mg od (not on the same day as weekly methotrexate)

Aciclovir 400mg bd

UKALL14 Maintenance Chemotherapy Toxicities	
Neutropenic sepsis & thrombocytopenia (high risk)	Opportunist infection
Mucositis	Sensory & motor neuropathy
Amenorrhoea & infertility (offer semen cryopreservation	Autonomic neuropathy – constipation, ileus
Liver dysfunction (methotrexate)	Pneumonitis (methotrexate)

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