BUSULFAN

Myeloproliferative disorders, including chronic myeloid leukaemia (CML)
For use where hydroxycarbamide not appropriate

Please note: This oral agent is being used for the above indications without curative intent, and has historically been used for many years without any proven optimal dosing or scheduling. Consequently, the schedule below is routinely used in the Alliance but is not exclusive. Doses are routinely modified according to individual response, but doses greater than below should be confirmed with a Consultant.

Drugs/Dosage:	**Busulfan**	0.25 mg/kg po once daily for 4 days (i.e. total dose 1mg/kg) (rounded to nearest 2mg)
Frequency:	Should not normally be repeated within 8 weeks (with the exception of a patient being given a low initial dose and after 4 weeks the counts are rising) Assess after 2 cycles - if no effect, abandon. If responding, continue until WBC fallen to between 15 and 25 x 10^9/L and platelets < 400 x 10^9/L. After this, a further cycle is only given if the counts rise again. Patients often do not require a further dose for several months or even a year or more.	
Administration:	only 2mg tablets available. Swallow whole with plenty of water.	
Other Drugs:	Allopurinol 300mg daily – review after 4 weeks	
Main Toxicities:	myelosuppression (with risk of irreversible bone marrow aplasia); alopecia; teratogenicity (see Comments); pulmonary fibrosis after prolonged use; ovarian failure; infertility; azoospermia (may be irreversible) - sperm banking should be offered before first dose if appropriate	
Anti- emetics:	not usually required	
Regular Investigations:	FBC LFTs U&Es	every 4 - 6 weeks for 3 months, then at each follow-up attendance baseline baseline
Comments:	Busulfan should not be given in conjunction with or soon after radiotherapy Busulfan may be teratogenic. Adequate contraceptive measures should be taken during and for 2 years after treatment if either partner is receiving busulfan.	

Dose Modifications

Haematological Toxicity:	The aim of treatment is to bring down the initial high counts, such that WBC falls to between 15 and 25 x 10^9/L and platelets < 400 x 10^9/L. If profound myelosuppression does occur, appropriate supportive treatment should be given during the period of haematological toxicity according to standard local practice/policies.
Hepatic Impairment:	A dose reduction may be considered if patient has raised liver enzymes

Reason for Update: a single schedule agreed, to facilitate e-Rx	Approved by Chair of Alliance TSSG: Dr A Laurie
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