Hydroxycarbamide

Indication
Essential thrombocythaemia (ET).
Primary polycythaemia when concomitant thrombocytosis is present.
CML and CMML (non-curative intent).
Palliative chemotherapy for AML.
Idiopathic myelofibrosis to control elevated white cell count (WCC) and painful splenomegaly.

ICD-10 codes
Codes prefixed with D47, D45, C92

Regimen details

Day	Drug	Dose	Route
Continuously	Hydroxycarbamide	500-2500mg OD*	PO

*dose titrated to blood count

Cycle frequency
Continuously

Number of cycles
Continued until disease progression or unacceptable toxicity.

Administration
Hydroxycarbamide is available as 500mg capsules. Capsules should be swallowed whole, however if the patient is unable to swallow capsules the contents of the capsule may be emptied into a glass of water and taken immediately. The contents of the capsule must not be inhaled or allowed to come into contact with the skin.

Pre-medication
Nil

Emetogenicity
This regimen has low emetic potential

Additional supportive medication
Allopurinol 300mg OD (or 100mg OD if creatinine clearance <20mL/min) if WCC > 50 $x10^9$/L
For patients with ET and polycythaemia – aspirin 75mg OD (and a proton pump inhibitor) depending on individual assessment of bleeding risk. Avoid if patient is taking warfarin or if platelets >1500$x10^9$/L.

Extravasation
N/A

Investigations – pre first cycle

Investigation	**Validity period** (or as per local policy)
FBC	14 days
U+E (including creatinine)	14 days
LFTs	14 days

Investigations – pre subsequent cycles

Investigation	**Validity period** (or as per local policy)
FBC	Every 7 days initially reducing to 12 weekly if stable
U+E (including creatinine)	Every 7 days initially reducing to 12 weekly if stable
LFTs	Every 7 days initially reducing to 12 weekly if stable

Standard limits for administration to go ahead

If blood results not within range, authorisation to administer **must** be given by prescriber/ consultant

Investigation	**Limit**
WCC	≥ 2.5 x 10^9/L
Neutrophils	≥ 1.5 x 10^9/L
Haemoglobin	≥ 90g/L
Platelets	Titrate dose to maintain platelets between 150-400x10^9 /L
Haematocrit	Titrate dose to maintain < 45%
CrCl	> 50mL/min

Dose modifications

- **Haematological toxicity**

If haemoglobin < 90g/L reduce dose to 50%.
If WCC < 2.5x 10^9/L or neutrophils < 1.5x 10^9/L reduce dose to 50%.
If neutrophils < 1.0 x 10^9/L or platelets < 100 x10^9/L omit for 5 days or until count recovery.

- **Renal impairment**

Creatinine Clearance (mL/min)	**Hydroxycarbamide dose**
> 50	100%
10-50	50%
<10	20%

Hydroxycarbamide should be used with caution in patients with marked renal dysfunction.

- **Hepatic impairment**

No dose modifications required.

- **Other toxicities**

Hydroxycarbamide causes increased skin sensitivity to sunlight. If patient experiences macular-papular rash, skin hyperpigmentation or an erythematous like lesion treatment should be withdrawn.

If vasculitic ulceration occurs treatment should be permanently discontinued.

Adverse effects - for full details consult product literature/ reference texts

- **Serious side effects**

Myelosuppression
Skin ulceration including vasculitic ulceration
Infertility
Pancreatitis and hepatotoxicity

- **Frequently occurring side effects**

Myelosuppression
Mild macrocytosis
Alopecia
Anorexia
Flu-like symptoms

- **Other side effects**

Drowsiness
Headache
Hyperpigmentation

Significant drug interactions – for full details consult product literature/ reference texts

Hydroxycarbamide is not licensed for use in combination with **antiretroviral agents**, including didanosine and stavudine due to reports of fatal events.

Additional comments

Leukaemogenic potential unknown.

References

- Summary of Product Characteristics Hydroxycarbamide (ER Squibb) accessed 8 Oct 2014 via www.medicines.org.uk
- Cancer drug manual. www.bccancer.bc.ca/HPI/drugdatabase

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