Methotrexate INTRATHECAL

INDICATION

CNS prophylaxis and treatment for patients with lymphoma and/or leukaemia
[Licensed / NHSE funded]

ALL INTRATHECAL DRUGS TO BE ADMINISTERED IN ACCORDANCE WITH
NATIONAL GUIDANCE AND LOCAL POLICY

TREATMENT INTENT

Prophylaxis used as part of a curative treatment regimen.
Can be used palliatively.

PRE-ASSESSMENT

- Blood tests - FBC, U&Es, LFTs, coagulation screen.
- Record performance status (WHO/ECOG).
- Consent - ensure patient has received adequate verbal and written information regarding their
disease, treatment and potential side effects. Document in medical notes all information that
has been given. Obtain written consent on the day of treatment.
- Urine pregnancy test - before cycle 1 of new chemotherapy course in women of child-bearing
age unless they are post-menopausal, have been sterilised or undergone a hysterectomy.
- Treatment should be agreed in the relevant MDT.

DRUG REGIMEN

Day 1 METHOTREXATE 12.5mg [or as indicated by specific protocol] INTRATHECALLY
Allow drug to reach room temperature before administering.

CYCLE FREQUENCY

Dependent on concurrent chemotherapy regimen.

RE-STAGING

For CNS treatment, continue at least weekly until CSF count normal + 1 further dose

DOSE MODIFICATIONS

Dose modifications are not recommended. Consider treatment delay if the platelet count is very low
or coagulation is abnormal. If platelets < 40x10^9/L give 1-2 pools of platelets (depending on prior
platelet increments) just before/during procedure. Correct any coagulation abnormality.
CONTRAINDICATIONS
Hypersensitivity to active ingredients and excipients. Refer for full details to Summary of Product Characteristics (SmPCs).

INVESTIGATIONS
FBC, U&Es, LFTs. Aim for platelet count of > 40 x 10⁹/L and PT/APTT within normal range.

CONCURRENT MEDICATIONS
Calcium folinate is indicated in specific protocols, otherwise none required. See individual treatment protocol.

EMETIC RISK
Minimal

ADVERSE EFFECTS
- Lumbar puncture side-effects: most common headache, swelling, bruising or discomfort in lower back; less common: arachnoiditis; fever, infection, rarely leucoencephalopathy
- Care should be taken if radiotherapy is given during or after intrathecal methotrexate therapy as it can exacerbate methotrexate toxicity
- IT methotrexate will reach the blood stream and can have systemic effects

INTERACTIONS
Anticoagulants and antiplatelets can increase the risk of bleeding when intrathecal methotrexate is administered during the lumbar puncture. Consider the risk of bleeding vs risk of thrombosis when suspending anticoagulants and antiplatelets. Refer to the Association of British Neurologists clinical guideline [Link] (summary of recommendations in Table 1 below).

Table 1. Recommendations for discontinuation of medications in patients with normal renal function.

<table>
<thead>
<tr>
<th></th>
<th>Anticoagulants</th>
<th>Antiplatelets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LMWH prophylaxis</td>
<td>LMWW treatment</td>
</tr>
<tr>
<td>Withhold before IT MTX</td>
<td>12 hours</td>
<td>24 hours</td>
</tr>
<tr>
<td>First dose after IT MTX</td>
<td>4 hours</td>
<td>4 hours (24 hrs if traumatic)</td>
</tr>
</tbody>
</table>

*Warfarin – consider bridging with LMWH in high-risk patients.
EXTRAVASATION RISK

Not applicable

TREATMENT RELATED MORTALITY

Less than 1%

REFERENCES


REVIEW

<table>
<thead>
<tr>
<th>Name</th>
<th>Revision</th>
<th>Date</th>
<th>Version</th>
<th>Review date</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSSG Lymphoma Group</td>
<td>Annual protocol review</td>
<td>May 2019</td>
<td>3.5</td>
<td>May 2021</td>
</tr>
<tr>
<td>NSSG Lymphoma Group, Graham Collins, Consultant Haematologist, Natalia Czub, Haematology Pharmacist</td>
<td>Annual protocol review. Contraindications and interactions sections updated.</td>
<td>July 2022</td>
<td>4.0</td>
<td>July 2024</td>
</tr>
</tbody>
</table>