METHOTREXATE (low dose)

Top tips for MURs

- Check that patient has had a full blood count, renal and liver function tests within last 4 weeks (within last 2 weeks if dose is being altered and therapy not yet stabilised)
- Check patient has a methotrexate record booklet & check that any dosage alterations have been annotated in the patients record booklet by the prescriber making that change
- Ensure that only one strength of methotrexate tablet is supplied to patient (record on PMR - 2.5mg tablets)
- Ensure that methotrexate tablets are taken once a week, on the same day each week. They should be swallowed whole, after food (Dose range 7.5mg – 25mg weekly)
- Counsel patient on signs / symptoms that need referral (see red flags below)
- Counsel patient on common side effects and how they should be managed (see below)
- Check that patient is also taking folic acid and counsel on how to take this correctly
- Counsel patient that if they vomit within a few hours of taking methotrexate not to take another dose
- Counsel patient on importance of effective contraception during treatment and for three months after stopping (both men & women as teratogenic)
- Counsel patient on ensuring that their alcohol intake is well within the maximum limits (2 units per day for women, 3 units per day for men per week)
- Advise patient to avoid OTC preparations containing NSAIDs / aspirin as additional NSAIDs can increase methotrexate levels (Please note that prescribed NSAIDs are often used intentionally in rheumatology until the methotrexate effect is established and low dose aspirin for cardiovascular indications, which should be continued as prescribed)
- Advise patient that full beneficial effect from methotrexate may not occur for up to twelve weeks after initiation and may take as long as 6 months for them to see the full effect

What is methotrexate used for?

Methotrexate is licensed for use in the treatment of rheumatic diseases, severe psoriasis, bowel disorders and to treat cancer (high doses only).

Red flags that need referral

- Severe sickness or diarrhoea for more than a few days as may need to consider stopping treatment altogether or switching to subcutaneous route.
- Signs of liver toxicity or blood dyscrasias
    - Regularly catching infections
    - Severe sore throats
    - Whites of eyes becoming yellow
    - Dark urine
    - Bruising or bleeding easily
- Severe itching or rash
- Signs of pulmonary toxicity
    - Shortness of breath (when resting & no signs of chest infection)
    - Cough
    - Fever
- Pregnancy, as risk of teratogenicity
- Breastfeeding as present in milk and a risk of toxicity in the infant
- Close contact with someone with chickenpox or shingles if you have never had these infections

How does methotrexate work?

Methotrexate works by slowing the production of new cells by the immune system, which causes a reduction in inflammation, therefore reducing swelling, joint stiffness, skin thickening and bowel damage. It reduces the permanent damage to joints caused by continuing inflammation.[1]

Compiled: D Roberts, WCPPE, November 2011
Expert review: Sarah Gage, C & V HB, December 2011

Potential drug interactions? – See BNF Appendix 1: Interactions for more details

- The plasma concentration of methotrexate may be increased by some antibacterials, ciclosporin, leflunomide, probenecid, retinoids and NSAIDs which may result in toxicity – more frequent monitoring may be needed if using these combinations
- An increased risk of haematological toxicity with concomitant use of co-trimoxazole/trimethorpim
- The antifolate effect of methotrexate is increased by concomitant use of antimalarials and phenytoin

What are the common side effects to look out for?

Gastro-intestinal disturbances particularly at initiation of therapy	Advise patient that normally settle after a few weeks, if persistent refer to GP for anti-emetic or dose alteration. Patients who feel sick/GI disturbance with methotrexate most commonly suffer with these symptoms on the day they take the methotrexate or the day immediately afterwards. Increasing the dose of folate or bringing the dose forward to the day after taking methotrexate often helps with this. Some patient find taking folic acid every day (except the day they take methotrexate) alleviates these symptoms enabling them to continue treatment with this drug
Thinning or hair loss	This is quite rare as low doses used (always reassure the patient that it is generally only associated with high dose treatment). Advise patient that usually slight and returns to normal on stopping treatment
Infections; Rash / itching	Refer to GP if persistent and troublesome

Where can you find more information?

- NPSA has issued a safety alert for safer methotrexate therapy and can be found on the NPSA website (http://www.nrls.npsa.nhs.uk/alerts/?entryid45=65426)
- Methotrexate – BNF sub-section 10.1.3 Drugs that suppress the rheumatic disease process
- Musculoskeletal disorders (level 1 & 2) distance learning packs can be found on WCPPE website (http://www.wcppe.org.uk)
- NICE guidance on management of rheumatoid arthritis that can be found on NICE website (http://www.nice.org.uk)

References

1 NPSA Oral methotrexate patient information leaflet & dosage record booklet

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