NHS South West London

Methotrexate GP information leaflet for neurological indications

NHS South West London supports the prescribing of Methotrexate (oral and subcutaneous) for patients in adult services (excluding cancer care) under shared care guidelines. This leaflet is intended to be used with those guidelines as an adjunct to be referenced for neurology indications. The BNF treatment summaries also provides information on prescribing immunosuppressants for neuromuscular disorders.

Methotrexate is an immunosuppressant. It is a well-established drug with a clearly recognised side effect profile. It is used in immune-mediated neurological disorders as a second line therapy (as a steroid-sparing agent) such as myositis[1], inflammatory neuropathies[2], myasthenia gravis[3] and others. Prescribing under shared care is supported by National Shared Care Guidelines.

Treatment of Myasthenia Gravis

Corticosteroids are established as treatment for myasthenia gravis. In generalised myasthenia gravis azathioprine is usually started at the same time as the corticosteroid and it allows a lower maintenance dose of the corticosteroid to be used. Ciclosporin, methotrexate, or mycophenolate mofetil can be used in patients unresponsive or intolerant to other treatments [unlicensed indications].

Treatment of Myositis

Conventional therapies include glucocorticoids usually in combination with another or multiple immunosuppressive agents including Azathioprine, Methotrexate, Mycophenolate, Tacrolimus and Cyclophosphamide remain the mainstay of treatment. Biologic agents including rituximab are being increasingly used.

Inflammatory Neuropathies:

The mainstays of treatment for nodal/paranodal antibody positive inflammatory/autoimmune neuropathy are corticosteroids or IVIg or rituximab or a combination of these. Medication which suppresses the immune system including azathioprine, methotrexate and cyclophosphamide may also be used to treat some patients.

Dosing and treatment schedule

- Initiation, loading period and initial maintenance dose will be prescribed by a specialist neurologist. Prescribing responsibility will not be transferred to primary care until the patient has been stabilised on a maintenance dose for at least 4 weeks.
- The starting dose of Methotrexate is 5mg once a week and is increased gradually by 2.5 to 5mg every 2 to 6 weeks until the disease is stabilized.

Ongoing monitoring schedule and advice in primary care

Time to response: 6 weeks to 3 months.

Side-effects

- Methotrexate may cause headaches, sickness, vomiting, diarrhoea, abdominal pain, alopecia and photosensitivity. These side effects usually improve as you become use to the medication.
- Other side effects include rash, mucositis, hepatotoxicity, renal dysfunction and interstitial pneumonitis.
- Bone marrow immunosuppression: blood dyscrasias (sore throat, bruising, and mouth ulcers), liver derangement (nausea, vomiting, abdominal discomfort, and dark urine) and interstitial pneumonitis (shortness of breath). Additionally, if you have not had chicken pox and come in close contact with anyone who has chicken pox or shingles contact your doctor.

Actions to be taken in primary care in the event of abnormal blood results or side effects

Refer to the Methotrexate (oral and subcutaneous) for patients in adult services (excluding cancer care) shared care. Please note that in addition to absolute values for haematological indices a rapid fall or a consistent downtrend in any value should prompt caution and extra vigilance.

Additional side effect, to those listed in the Methotrexate (oral and subcutaneous) for patients in adult services (excluding cancer care) shared care:

- **Rash**
    - Action: Withhold and discuss with specialist.

Notable drug Interactions

Refer to the Summary of Product Characteristics and BNF for a full list**.** Additional interaction to those listed in the Methotrexate (oral and subcutaneous) for patients in adult services (excluding cancer care) shared care:

- **Diuretics**: Tolbutamide

References

[1] Oddis CV, Aggarwal R. Treatment in myositis. Nat Rev Rheumatol. 2018 May;14(5):279-289. doi: 10.1038/nrrheum.2018.42. Epub 2018 Mar 29. Erratum in: Nat Rev Rheumatol. 2018 Oct;14(10):619. PMID: 29593343.

[2] Collins MP, Hadden RD. The nonsystemic vasculitic neuropathies. Nat Rev Neurol. 2017 Apr 27;13(5):302-316. doi: 10.1038/nrneurol.2017.42. PMID: 28447661.

[3] Sussman J, Farrugia ME, Maddison P, Hill M, Leite MI, Hilton-Jones D. Myasthenia gravis: Association of British Neurologists' management guidelines. Pract Neurol. 2015 Jun;15(3):199-206. doi: 10.1136/practneurol-2015-001126. PMID: 25977271.

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