

Side Effects of Methotrexate Treatment in Rheumatoid Arthritis Patients

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Introduction

Methotrexate is a first line disease-modifying anti-rheumatic drug which offers good efficacy, good tolerability and low cost^{1,2}.

Aim

The aim of the study was to assess patient knowledge, experience and perception of occurrence of methotrexate side effects in rheumatoid arthritis.

Method

Patients were eligible for inclusion in the study if they were over 18 years of age, diagnosed with rheumatoid arthritis on methotrexate, capable to communicate with the researcher and attend the Rheumatology Out-Patients Clinic at Mater Dei Hospital on a regular basis. A psychometrically evaluated questionnaire which was divided into 4 main sections (A to D) was compiled in English and Maltese. Section A dealt with patients' knowledge about possible side effects that may be encountered during treatment with methotrexate and examined their awareness on other aspects of treatment such as family planning and concurrent use of alcohol and medications. In Section B patients identified side effects which have affected them since they started taking methotrexate treatment. Section C focussed on how patients reacted to the development of side-effects. Section D assessed patients' compliance with their medication.

Results

A total of 40 patients with an average age of 62 years (SD 13 years) participated in the study. Out of a total of 40 patients, 67.5% were females. Methotrexate was used as single therapy in 24 patients and the remaining 16 patients received methotrexate in combination with another DMARD. Thirty one patients (77.5%) reported a total of 78 side effects. The most commonly reported side effects were nausea and vomiting (n=15), abdominal pain (12), alopecia (8) and joint pains on the day of methotrexate administration (5) (Table 1). The majority of the patients (n=21 out of 31) reported their side effects to the consultant at the next Rheumatology Clinic visit. Twenty-five patients who had originally said 'no' to experiencing side effects changed their answer to 'yes' after being read a list of methotrexate side effects. With respect to compliance, 17 out of 40 patients (43%) had failed to take their medication at some point in their treatment. A total of 6 out of 17 patients (35.3%) reported that this rarely happened, blaming forgetfulness and a busy lifestyle as reasons for non-compliance.

Table 1. Types of Side effects Reported

Side Effects Reported	No.
Nausea and vomiting	15
Abdominal pain and indigestion	12
Alopecia	8
Joint pains on day following drug	5
Weight loss	5
Diarrhoea	4
Rashes	4
Dizziness	4
Raised liver enzymes	4
Skin nodules	4
Fever	4
Headaches	4
Lung fibrosis and dry cough	2
Depression	2
Hypertension	1

Conclusion

Patients' knowledge on occurrence of side effects could be improved indicating the need for pharmacists to offer continuous education on drug therapy and compliance.

¹ Kay J, Westhovens R. Methotrexate: the gold standard without standardisation. *Ann Rheum Dis* 2009;68:1081-1082.

² Smolen JS, Landewe R, Breedveld FC, Dougados M, Emery P, Gaujoux-Viala C et al. EULAR recommendations for the management of rheumatoid arthritis with synthetic and biological disease-modifying antirheumatic drugs. *Ann Rheum Dis* 2010;69:964-975.