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Multiple Sclerosis (MS) patients may be exposed to disease modifying therapies (DMTs) during the first trimester in unplanned pregnancies. We aimed to evaluate pregnancy outcomes in MS patients exposed accidentally to DMTs.

Data of MS pregnant women were extracted from the national MS registry. Details of drug exposure and pregnancy outcomes were collected. Pregnancy outcomes in women who were exposed to DMTs were compared to women who discontinued DMTs prior to conception.

Outcomes of 142 pregnancies (120 women) were assessed; 80 (56.3%) of which were exposed to DMTs. There were no significant differences between DMT-exposed pregnancies and the non-exposed in terms of mean age ( $p=0.95$ ), age at onset ( $p=0.84$ ), age at pregnancy confirmation ( $p=0.37$ ) or disease duration ( $p=0.35$ ). In the exposed group, the most used DMTs were beta interferons ( $n=50$ ; 35.2%), natalizumab ( $n=28$ ; 19.7%), fingolimod ( $n=24$ ; 16.9%), and dimethyl fumarate ( $n=5$ ; 3.5%). In the non-exposed group, 53.2% ( $n=33$ ) of patients were not on DMTs, while 21% ( $n=13$ ) were on fingolimod, 19.4% ( $n=12$ ) were on beta interferons and 4.8% ( $n=3$ ) were on dimethyl fumarate. Most pregnancies (~85%) resulted in full term births. There were no significant differences between the exposed and non-exposed in the rate of premature birth (5% versus 3.2%) and abortions (10% versus 11.3%) [ $p=0.47$ ]. No major fetal malformations were reported.

Most of the pregnancies in our cohort were exposed to disease modifying therapies. The pregnancy outcomes in patients exposed to DMTs is comparable to those were not exposed.

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### 1-Year Follow Up Efficacy of Fingolimod in the Treatment of Relapsing-Remitting Multiple Sclerosis (RR-MS) Among Saudi Patients

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Fingolimod is a sphingosine 1-phosphate (S1P) receptor modulator and was the first oral therapy to be approved for multiple sclerosis (MS), receiving a broad first-line indication for relapsing-remitting forms of MS (RR-MS) in the United States of America (USA) in 2010. Fingolimod has shown a significant effect on clinical and magnetic resonance imaging outcome. The aim of this study is to assess the clinical and radiological efficacy of 1 year of Fingolimod in patients with RR-MS.

A retrospective study of Saudi patients diagnosed with relapsing RR-MS and managed with Fingolimod at Prince Sultan Military Medical City (PSMMC), Riyadh, Saudi Arabia, between 2014 and 2016. MS diagnosis was confirmed based on clinical relapses and T1 and T2 magnetic resonance imaging (MRI) findings consistent with McDonald criteria. Clinical characteristics including total number of relapses, Expanded Disability Status Scale (EDSS), along MRI findings outcomes were retrieved from medical records of compliant patients who has at least a 1- year follow up.

Between January 2014 and December 2016, 20 patients (15 women) were prescribed fingolimod 0.5 mg daily, either as first-line or escalation therapy. All patients were complaint to the treatment for at-least 1 year follow up. Mean age was  $32.25 \pm 11.02$ . Furthermore, 19 patients had relapsing-remitting multiple sclerosis. The annual relapse rate (ARR) was 0 in 18 patients along with n EDSS of 0 in 15 patients. Moreover, there was significant reduction of gadolinium enhancement lesion

on MRI in 17 patients and no new lesions in all. 85% of the fingolimod-treated patients achieved no evidence of disease activity (NEDA-3).

Fingolimod showed high efficacy in the stabilization of relapsing-remitting multiple sclerosis among Saudi patients following 1 year of treatment. This was reflected in terms of clinical and radiological findings. Fingolimod robust effect on NEDA-3 was quite clear.

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### Rituximab is a Safe and Efficient Treatment in Multiple Sclerosis and Neuromyelitis Optica Spectrum Disorder: Real World Observational Study

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Rituximab is a safe, efficient and off-label drug in treatment of multiple sclerosis (MS) but is also approved in NMOSD.

100 patients entered the 2-year rituximab cohort study in our center, of whom 20 were males and 80 females. The mean age was 36. Out of the 100 patients, 58 were diagnosed with relapsing-remitting MS (RRMS), 33 with secondary progressive MS (SPMS), 4 with primary progressive MS (PPMS), 3 with neuromyelitis optica spectrum disorder (NMOSD), 1 with recurrent isolated optic neuritis (RION) and 1 with chronic relapsing inflammatory optic neuropathy (CRION). Rituximab 500-1000mg was prescribed every 6 months. 16 patients were treatment-naïve. Rituximab was discontinued in 9 patients for pregnancy planning or other reason. Five continued to receive their infusions in other centers.

80% of our patients were relapse-free during these 2 years. Annual relapse rate was reduced by 85% in multiple sclerosis patients. 47% had a stable Expanded Disability Status Scale (EDSS), 34% had improved EDSS and 17% had progression of their disability. Patients with other disorders (NMOSD, RION and CRION) were stable with no evidence of relapse or progression. 88% experienced infusion-reactions as acute adverse events and 51% had delayed adverse events. All adverse events were not serious.

Rituximab is a safe and efficient drug in multiple sclerosis and neuromyelitis optica spectrum disorder.

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### Expert Opinion on the Use of Cladribine Tablets in Clinical Practice for the Treatment of Relapsing Multiple Sclerosis

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