An International Registry Tracking Pregnancy Outcomes in Women Treated With Dimethyl Fumarate

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Conclusions
• Consistent with previous reports,2,4 no safety signal was observed for DMF exposure in relation to pregnancy outcomes based on data from an interim analysis of this ongoing international registry.
• The rates of birth defects and spontaneous abortions from this interim analysis were similar to the rates observed in clinical trials of DMF6,11 and both are similar to the rates observed in the general population.2
• The rate of birth defects from the interim analysis was similar to the rate observed in the MS population4,11 and the general population (2–5%)15.
• Ongoing recruitment to this registry, including additional information from the United Kingdom and Ireland, will provide essential information on pregnancy outcomes among women exposed to DMF during pregnancy.

Introduction
• Dimethyl fumarate (DMF) also known as gastro-resistant DMF) demonstrates clinical efficacy in a few randomized placebo-controlled trials.9
• As of 08 April 2019, 263 women (12 from the United Kingdom and 2 from Ireland) were enrolled in the registry; mean (SD) age was 32 (4) years (Table 1).
• Nearly two-thirds of patients are MS women,9 of whom are in their thruming years.
• Available data from clinical trials and postmarketing reports have not demonstrated any safety signals with DMF exposure during pregnancy; however, experience remains limited.
• In clinical trials, no increased risk of fetal abnormalities or adverse pregnancy outcomes was observed; pregnancy outcomes have been reported in 642 DMF-exposed patients as of 26 March 2018; 97 (15%) live births; 4 (4%) premature births; 14 (15%) spontaneous abortions; and 28 (47%) elective terminations.
• In the postmarketing setting, less than half of all known pregnancy outcomes have been reported suggesting potential reporting biases11; however, in the total pregnancy outcomes reported (n = 1469), no increased risk of fetal abnormalities or adverse pregnancy outcomes has been observed.
• The DMF product label recommends use during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Objectives
• The objectives of this interim analysis is to assess pregnancy outcomes in an ongoing international registry (NCT01517767) of women with MS exposed to DMF as of 26 March 2018.

Methods

Results

Patient Demographics and DMF Exposure
• As of 08 April 2018, 263 women (12 from the United Kingdom and 2 from Ireland) were enrolled in the registry (mean age was 32 ± 4 years (Table 1).
• A total of 73% had a pregnancy with treatment data available (Figure 2). In the 252 women with a known exposure, Earliest DMF exposure occurred in the first (99.6%; 251/252), second (0.4%; 1/252), and third (0%) trimesters in the 252 women with a known exposure.

Pregnancy Outcomes
• In this interim analysis, 214 pregnancy outcomes were reported, including 197 (92%) live births (Figure 2). 16 (7%) spontaneous abortions, and 1 stillbirth at 9–23 weeks of gestation.

Potential birth defects are adjudicated by an external teratology expert.

Statistical Analysis
• Gestational weight was classified based on World Health Organization or country-specific growth charts: appropriate (birth weights 2500–4000 grams), small (birth weights 0–2499 grams), and large (birth weights > 4000 grams). 95% CI were calculated for the age registry population were calculated for this interim analysis.

Table 1. Patient Characteristics and DMF Exposure

Table 2. Incidence of Maternal and Fetal Deaths and Birth Defects

Table 3. Registry Content

References