The use natalizumab in multiple sclerosis patients during pregnancy is safe and prevents disease reactivation
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Objective: To assess the effectiveness and safety of natalizumab in Multiple Sclerosis (MS) patients during pregnancy

Background: Natalizumab has been used in selected highly active MS patients during pregnancy as an off-label indication. Data of the use of natalizumab during pregnancy is limited.

Design/Methods: Data of women using natalizumab was extracted from the national registry. The cohort constituted 3 groups; patients continued natalizumab during pregnancy till 28th gestational week (group 1), patients discontinued natalizumab before pregnancy (group 2) and a control group that included women who did not get pregnant (group 3). Demographics and clinical characteristics of the three groups were assessed. Clinical (relapses) and radiological (MRI new T2/ gad-enhancing lesions) data during pregnancy and at one-year post delivery were compared

Results: 68 patients were identified; group 1 (n=14), group 2 (n=14), and group 3 (n=40). At baseline, there were no significant differences across the three groups in mean age (p= 0.07), mean age at onset (p= 0.44), mean disease duration (p= 0.21), annualized relapse rate (p= 0.27) and MRI measures (p= 0.25). The mean number of natalizumab infusions was 44 ± 26.05. During pregnancy, no relapses occurred in group 1 while four patients (28.6%) sustained relapses in group 2 (p = 0.03). At last follow-up visit, annual relapse rate was significantly higher in group 2 (0.75 ± 0.51), compared to groups 1 & 3 (0.14 ± 0.36 & 0.05 ± 0.22; p < 0.001) respectively. The proportion of patients with MRI activity was significantly higher in group 2 compared to groups 1 and 3 (50%, 7.1%, and 2.5%; p= 0.03). Abortion rate was not statistically significant between group 1 and 2 (p= 0.47) and no fetal malformation was observed.

Conclusions: Patients who continued using natalizumab during pregnancy remained in remission while natalizumab discontinuation resulted in disease reactivation. The use of natalizumab during pregnancy was safe in our cohort