Abstract Title: #P04.268 - Natalizumab-associated progressive multifocal leukoencephalopathy (PML) in multiple sclerosis patients: survival and functional outcome when asymptomatic at diagnosis

Press Release Title: Early Detection of MS Treatment Complication May Improve Survival

Objective: To evaluate outcomes in natalizumab-treated multiple sclerosis (MS) patients who were asymptomatic when diagnosed with PML.

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Background: As of January 1, 2013, 319 natalizumab-associated PML cases were confirmed in MS patients.

Designs/Methods: Asymptomatic patients, diagnosed by MRI findings consistent with PML and JCV DNA positive CSF, were compared with patients symptomatic for PML at diagnosis. Demographics, MRI, and survival were analyzed. Expanded Disability Status Scale (EDSS) and Karnofsky Performance Scale (KPS) scores were recorded pre-PML, at diagnosis, and at 6 and 12 months post-PML diagnosis. Data are as of January 1, 2013.

Results: At diagnosis, 21 PML patients (mean age 45.1 years; 66.7% female; median natalizumab exposure 36 doses) were asymptomatic (AP); 298 (mean age 45.8 years; 70.5% female; median natalizumab exposure 38 doses) were symptomatic (SP). PML lesions on MRI in AP vs SP were 76% vs 36% unilobar, 14% vs 25% multilobar, and 10% vs 39% widespread, respectively. In both AP and SP, frontal lesions predominated. Symptoms developed in 10/21 AP at 13.8 weeks (mean) after diagnosis of PML; 5 of these patients had cognitive deficits and/or behavioral changes. Mean EDSS and KPS scores for AP vs SP, respectively, were as follows: pre-PML, EDSS 3.2 (n=14) vs 3.8 (n=145; P=0.263), KPS 88.0 (n=5) vs 80.1 (n=72; P=0.144); at diagnosis, EDSS 3.6 (n=8) vs 5.3 (n=154; P=0.020), KPS 66.7 (n=6) vs 53.6 (n=88; P=0.129); at 6 months, EDSS 4.7 (n=9) vs 6.9 (n=70; P=0.003), KPS 71.7 (n=9) vs 46.0 (n=88; P<0.001); at 12 months, EDSS 3.7 (n=3) vs 6.5 (n=39; P=0.066), KPS 70.0 (n=4) vs 46.9 (n=50; P=0.021). As of January 1, 2013, 100% of AP and 76.5% of SP have survived.

Conclusions: Preliminary data suggest that PML patients who are asymptomatic at diagnosis may have improved survival and less functional disability compared with PML patients who are diagnosed when symptomatic.
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