Abstract 1601

Benefit-risk of ofatumumab in treatment-naïve early relapsing multiple sclerosis patients

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Background

Ofatumumab, a fully human anti-CD20 monoclonal antibody with a monthly 20 mg s.c. dosing regimen, demonstrated superior efficacy vs teriflunomide and a favorable safety profile in the Phase 3 ASCLEPIOS I/II relapsing multiple sclerosis (RMS) trials.

Objectives

To evaluate the benefit-risk profile of ofatumumab treatment in patients with early RMS in the Phase 3 ASCLEPIOS I/II trials.

Methods

Key efficacy and safety outcomes were assessed in the subgroup of 615 newly diagnosed (within 3 years before screening), treatment-naïve (no prior disease-modifying therapy [DMT] use) patients who received ofatumumab or teriflunomide as a first-line therapy in ASCLEPIOS I/II trials (32.7% of the total 1882 patients).

Results

Baseline characteristics of the newly diagnosed, treatment-naïve subgroup were typical of early MS patients (median age and MS duration since diagnosis (years) were 36 and 0.35, respectively). Compared to patients on teriflunomide, ofatumumab reduced ARR by 50.3% (0.09 vs 0.18; $p<0.001$), 3mCDW risk by 38% (10.1% vs 12.8%; $p=0.065$), 6mCDW risk by 46% (5.9% vs 10.4%; $p=0.044$), gadolinium-enhancing T1 lesions/scan by 95.4% (0.02 vs 0.39: $p<0.001$), and new/enlarging T2

lesions/year by 82.0% (0.86 vs 4.78, p<0.001). Treatment-emergent adverse events (AEs) occurred in 84.7% ofatumumab vs 86.0% teriflunomide-treated patients; serious AEs were reported in 7.0% and 5.3%, respectively. No cases of malignancies were reported in this newly diagnosed subgroup, randomized to either drug. Infection rates were comparable between ofatumumab (56.1%) and teriflunomide (56.5%); serious infections rates were 1.9% and 0.7%, respectively, and no opportunistic infections were reported. Systemic injection reactions were only imbalanced between ofatumumab and teriflunomide (with placebo injections) at the first injection given at the study site, and 99.8% of injection reactions were mild-to-moderate in this subgroup; after the 4th injection, >70% RMS patients self-injected at home. Compliance of all patients with ofatumumab was high (98.8%).

Conclusions

Ofatumumab is the first high efficacy DMT that can be self-administered at home, as demonstrated in Phase 3 ASCLEPIOS I/II trials. Ofatumumab showed superior efficacy vs teriflunomide in newly diagnosed, treatment-naïve patients with low absolute relapse rates, very low MRI lesion activity and prolonged time to disability worsening, consistent with the overall study population.

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