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Abstract Title: Long-term Effect of Ofatumumab on Serum Immunoglobulin Levels in Patients With Relapsing Multiple Sclerosis

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Introduction:

Cumulative safety data from core clinical trials and the ongoing ALITHIOS open-label extension study up to 4 years of ofatumumab treatment have shown that majority of patients had serum immunoglobulin (Ig) levels that remained above lower limit of normal (LLN); mean serum IgG levels remained similar to baseline values, and the mean IgM levels decreased over time but stayed above the LLN.

Objectives/Aims:

To evaluate the effect of ofatumumab on serum IgG/IgM levels up to 5 years during the core and open-label extension studies.

Methods:

Change in IgG/IgM levels from baseline for up to 5 years (cut-off: 25-Sep-2022) of ofatumumab treatment was analysed in the overall (N=1969), continuous (ofatumumab in core+extension; N=1292) and switch (teriflunomide in core, ofatumumab in extension; N=677) groups. The analysis also included proportion of patients with IgG/IgM levels <LLN (g/L: IgG, 5.65; IgM, 0.4) and the number of patients with serious infections that occurred within 1 month prior and until 1 month after IgG/IgM < LLN.

Results:

In the overall group (median time on ofatumumab: 3.3 years), almost all patients (98%) had IgG levels that did not drop below the LLN at any assessment from the first dose of ofatumumab for up to 5 years.

Additionally, the mean IgG levels remained stable for up to 5 years of treatment (mean % change from BL to Week 264, -2%). Serious infections were reported in 3/40 (7.5%) patients with IgG levels <LLN (vs. 99/1926 (5.1%), ≥LLN). Majority of patients (69.4%) had IgM levels that did not drop below the LLN at any assessment and while mean IgM levels decreased, they still remained above LLN (mean % change from BL to Week 264, -49%). Serious infections were observed in 10/601 (1.7%) patients with IgM levels <LLN (vs. 72/1365 (5.3%), ≥LLN). Treatment interruptions/ discontinuations were reported in 0.2%/0.2% patients due to low IgG and 10.3%/3.6% patients due to low IgM. Sensitivity analyses demonstrated that interruptions/ discontinuations did not affect the overall IgG/IgM pattern.

Conclusion:

With up to 5 years of ofatumumab treatment, the majority of patients (IgG 98%, IgM 69.4%) did not have Ig levels that dropped below LLN at any assessment. Overall, the number of serious infections was low in patients with Ig levels that did drop below the LLN.

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