Five Years Analysis of anti-Glatiramer Acetate (GA) Antibodies in Patients with Relapsing Remitting Multiple Sclerosis Treated with GA Depot

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BACKGROUND

GA Depot consists of extended-release microspheres containing GA, administered intramuscularly once every 28 days. GA Depot activity was evaluated in a long-term phase IIa study in relapsing remitting MS (RRMS) patients. During the study, serum samples from patients were collected and analyzed for anti-GA antibodies.

OBJECTIVE

Long-term assessment of anti-GA Antibodies in the sera of patients treated with GA Depot and its correlation with GA Depot's safety and efficacy

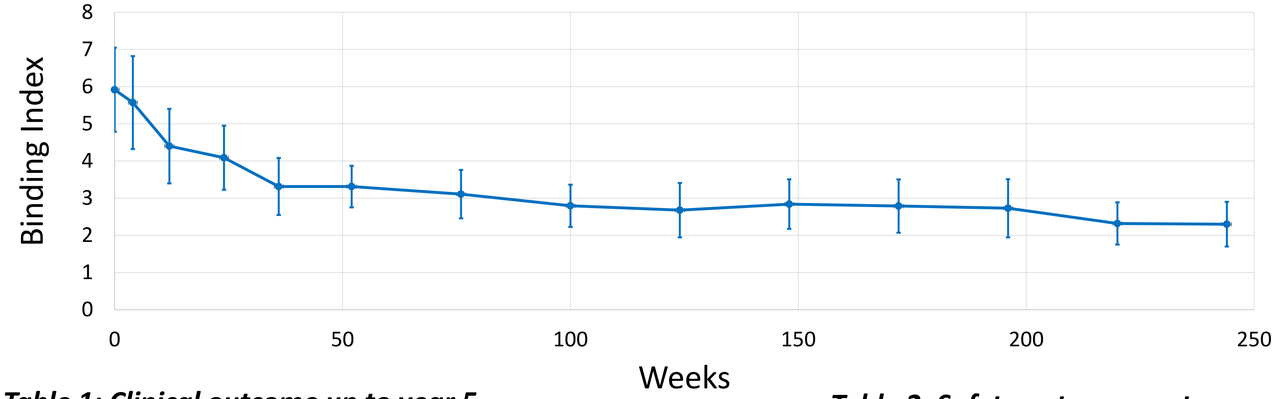
DESIGN/METHODS

Main eligibility criteria: age 18-70 years, diagnosis of RRMS and treatment with Copaxone® for ≥12 months prior to enrollment. Patients received monthly GA Depot at doses of 80mg or 40mg in the core study (one year) and 40mg in the study extension for a total of 244 weeks. Anti-GA antibodies levels were determined using ELISA. Correlation assessment between antibodies levels and clinical safety and efficacy was performed using descriptive statistics.

RESULTS

Average anti-GA antibodies levels at study baseline and one month following the first injection were similar (Binding Index (BI) of 5.92 +/- 1.13 and 5.57 +/- 1.25 respectively). Levels declined from week 12, reaching BI of 2.80 +/- 0.57 at week 100. This trend was sustained until week 244 (BI of 2.30 +/- 0.60), see Figure 1. The efficacy of GA Depot was similar throughout the study (yearly NEDA-3 for the Per Protocol population was 84.6% for the core study, 81.8% for the 2nd year of the study and 90% for years 3, 4 and 5, see Table 1). The rate of AEs, injection site reactions and SAEs was continuously reduced from the core study throughout the extension and confirmed a good safety profile (see Table 2).

Figure 1: Mean anti-GA antibodies levels in GA Depot treated patient's



Cumulative data from two years and three years analysis. Data presented as average +/- standard error, n = 6 to 10

Table 1: Clinical outcome up to year 5

	Year 1	Year 2	Year 3	Year 4	Year 5
Relapses	1	1	0	0	0
Changes in MRI	1	0	0	0	1
CDP	0	1	1	1	0
NEDA 3 (%)	84.6	81.8	90	90	90

Table 2: Safety outcome up to year 5

	Year 1	Year 2	Year 3	Year 4	Year 5
ISR rate	0.877	0.23	0.09	0.05	0.025
AE rate	1.52	0.56	0.29	0.25	0.19
SAEs	3	1	1	0	1

Efficacy data presented for per-protocol population, safety date for intend to treat (ITT) population. Injection site reactions (ISR) and adverse events (AE) rate is number of Adverse Events adjusted to number of injections given at the year analyzed.

CONCLUSIONS

Anti-GA antibodies levels in GA Depot treated patients followed the same trend as for GA (Copaxone®) treated patients (previously reported). The levels of anti-GA antibodies were not correlated to the safety and efficacy clinical outcomes in the study population (as previously reported for Copaxone®) .

DISCLOSURES

Prof. Ariel Miller participated as the core-study Coordinating Principal Investigator and as a site Principal investigator (PI) in the study funded by Mapi Pharma.
Dr. Shlomo Flechter participated as the extension-study Coordinating Principal Investigator and as a site Principal investigator (PI) in the study funded by Mapi Pharma .
Dr. Ron Milo, Prof. Joab Chapman, Dr. Alla Shifrin, Prof. Ronit Gilad, Prof. Dimitrios Karussis and Prof. Arnon Karni participated as PIs in the study funded by Mapi Pharma .Prof. Tamir Ben Hur is a Scientific Advisory Board member of Mapi Pharma. Dr. Chen Hoffmann participated as the central reading MRI facility in the study funded by Mapi Pharma.

Study Supported by: Mapi Pharma Ltd