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PREDICTIVE VALUE OF MAGNESIUM LEVELS IN DEPRESSED PATIENTS

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Background and aim: High, normal or low plasma magnesium (Mg) levels have been observed in depressed patients. The aim of our study was to investigate the relationship of plasma Mg levels with depression severity, specific psychopathological dimensions and treatment outcome.

Materials and methods: 123 outpatients (M/F 60/63; mean age=48±15) during a Major Depressive Episode (MDE) were recruited. Most of them were affected by "difficult to treat" depression, that includes patients with history of at least two MDE, risk of chronicization and who did not achieve remission in previous treatments.

The psychopathological status was assessed using HAM-D, HAM-A, DRRS for psychomotor retardation and SHAPS for anhedonia. HAM-D was repeated at 3 months. A blood sample was collected to determine total plasma Mg levels.

Results: We observed an association between Mg levels and psychomotor retardation scores ($p = 0.045$). Moreover, subjects with residual symptoms after treatment (HAM-D at 3 months > 15) have lower starting Mg values compared to treatment-responsive individuals (2.14±0.2 vs. 2.25±0.21, p=0,039).

Conclusions: Conflicting data on plasma Mg levels in depression could be due to the isolation of brain Mg compartments from blood Mg compartments. As in a previous study, the association between high Mg levels and psychomotor retardation found in this larger sample strengthens the notion that high Mg levels play a part in the hypoactivity so often observed in depressed patients. Also, low Mg values in patients with poor treatment outcome suggest Mg could have a therapeutic potential in "difficult-to-treat" patients.