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ASSOCIATION OF MAGNESIUM SULFATE IN THE STANDARD TREATMENT OF HYPERTENSIVE ENCEPHALOPATHY TO THE PREHOSPITAL STAGE

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Introduction. In hypertension are deregulated intracellular homeostasis and trans-membranes transport of magnesium (Mg2+). Magnesium decreases not only in hypertension, but also in antihypertensive treatment, especially with diuretics and beta-blockers. Pharmacologically MgSO4 is a specific antihypertensive agent, musculotropic vasodilator with direct action on arteries and veins and it is a unique Calcium (Ca2+) antagonist, because Mg2+ is a physiological Ca2+ competitor.

Keywords. Hypertension, Magnesium Sulfate, Hypertensive Encephalopathy, Prehospital, Emergency.

Purpose. The importance and efficacy of magnesium sulfate administration in Hypertensive Encephalopathy to the Prehospital stage.

Material and methods. Retrospective analysis of the Prehospital Emergency Medical Service Request Sheets in Republic of Moldova from 2017 for Hypertensive and Cardiovascular Emergencies, and for the treatment of Hypertensive Crises with MgSO4 in association with standard antihypertensive treatment.

Results. In Republic of Moldova, in 2017, at the prehospital stage, intravenous administration of MgSO4 in a dose from 1,0 to 5,0 g was effective in the cases of patients with non-responsive hypertensive crises on standard antihypertensive therapy, including hypertensive encephalopathy. ***Table 1. Blood pressure values in 200 patients with hypertensive crises before and after standard antihypertensive therapy administration and in combination with intravenous MgSO4 administration at a dose of 1,0 (1,25) – 2,5 – 5,0 g.***

SBP before standard antihypertensive therapy administration (SATA), mmHg / Nr of the patients - Abs. (%)	Systolic Blood Pressure after SATA, mmHg / Number of the patients - Abs.	SBP after SATA + MgSO4, mmHg / Number of the patients - Abs.
180 – 200 /134 (67%)	169 – 188 / 67	151 – 165 / 67
200 – 220 / 44 (22%)	181 – 197 / 22	162 – 178 / 22
>220 / 22 (11%)	198 – 211 / 11	177 – 182 / 11

Conclusions. MgSO4 can be an effective drug in the treatment of Hypertensive Encephalopathy and Crises, if there are no contraindications, an intravenous dose of MgSO4 of 1,0 (1,25) – 2,5 – 5,0 g, slow, over 5 – 10 – 15 minutes, in association with standard antihypertensive treatment, is recommended.