

## 12. HOW TO BETTER LEARN HYPERTENSIVE DISORDERS OF PREGNANCY THROUGH SIMULATION IN REPUBLIC OF MOLDOVA



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**Introduction.** The incidence of hypertensive disorders of pregnancy (HDP) has been reported up to 5-9%, with a significant rate of subsequent preeclampsia (15%), eclampsia (2%), and a high rate of maternal /fetal mortality (up to 35%). In the last 3 years, 1019 cases of preeclampsia were assessed in the Republic of Moldova (RM), accounting for 11.7% of all admissions to the obstetric and gynecological intensive care unit. Hence, simulations were deemed necessary to obtain important information and practical skills in emergency obstetrics.

**Aim of study.** To assess the significance of simulation in enhancing understanding and practical skills in HDP.

**Methods and materials.** A total of 78 participants, consisting of 41 doctors (52.6%) and 37 nurses (47.4%), were surveyed during simulation training for obstetric emergencies at the Tertiary Perinatal Center in Chisinau, RM.

**Results.** During the simulation, 3 scenarios were presented. Pregnancy-induced hypertensive states were defined by: Systolic blood pressure (SBP)  $\geq 140$  mmHg and diastolic blood pressure (DBP)  $\geq 90$  mmHg (2 assessments, 4h interval) or DBP  $\geq 110$  mmHg (single assessment) at  $\geq 20$  weeks of pregnancy. Preeclampsia presented: SBP  $\geq 160$  mmHg and DBP  $\geq 110$  mmHg, also target organ signs. Eclampsia was identified by the appearance of convulsions. The objective examination was performed. The diagnosis was established based on the patient's history, BP, pulse, Fetal heart rate, US exams, and Doppler velocimetry on the uterine, umbilical, and middle cerebral arteries of the fetus and the ductus venous. The laboratory data were used. During the medical emergency simulation, the management of HDP included: MgSO<sub>4</sub> and antihypertensive therapy, as well as the way of delivery (mainly by C-section). All of the above mentioned were necessary to prevent possible complications, such as *abruptio placenta*, bleeding, fetal distress, prematurity, thrombotic complications, and fetal /maternal death. Almost all participants (96.2%) emphasized the importance of simulation in the learning of emergency obstetric conditions, specifically in cases of HDP.

**Conclusion.** HDP and preeclampsia are often associated with several complications, the mandatory treatment being the urgent termination of pregnancy (often by C-section). The simulation is a powerful tool in training doctors and nurses to handle HDP, and is a practical way to translate knowledge into real-life scenarios.

**Keywords.** Hypertensive disorders of pregnancy, preeclampsia, simulation.