DOI: doi.org/10.47363/JMCN/ICNCG2026/2026(7)3

Active Drug-Free Prophylaxis of Hypotension Supine Syndrome in Pregnant Women for Safe Obstetric Surgical Interventions Under Local Anesthesia

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Abstract

Background: Due to the increase in the number of non-obstetric surgical interventions during pregnancy under local anesthesia, surgeons have encountered such a pathology as hypotension syndrome on the back during pregnancy (SHSP). This pathology was described by Howard R. et al. (1953). It only occurs in pregnant women, starting in the middle of the 11th trimester and throughout the 111th trimester. It manifests itself in a decrease in blood pressure (BPD) in pregnant women by 30-40% of baseline within 2-10 minutes, with corresponding clinical manifestations in both the pregnant woman and the fetus. Pathology occurs in patients who mainly lie on their backs, less often sitting. According to various authors, this pathology occurs in 20-70% of this group of patients - from latent forms to hypotonic shock. The task is to develop and actively implement safe surgical intervention under local anesthesia of the position of a pregnant woman on the operating table as one of the factors in the prevention of SHSP.

Material and Methods: The analysis was carried out on the basis of 780 non-obstetric surgical interventions in pregnant women in the 11th and 111th trimesters under local anesthesia for primary symptomatic varicose veins of the lower extremities in saphenoid, non-saphene veins and in combination. All pregnant women during surgery were placed on the operating table in the initial position, lying on their backs, and the table top was turned 30 0 to the left, with both lower limbs bent at the hip and knee joints at 120 0, the head and chest raised by 30 0.In this position, for 2-3 minutes, we observe the dynamics of pressure on the brachial arteries, pulse rate and the presence of clinical manifestations of SHSP.

Result: 98.3% of operated pregnant women showed no manifestations of SHSP. 1.7% showed mild manifestations of SHSP, requiring a change to 45 0, while the pressure stabilized to baseline without clinical symptoms in pregnant women with this pathology. Drug therapy support was not required.

Conclusion: The proposed position of the pregnant woman on the operating table stabilized blood pressure, minimizing compression by the pregnant uterus of the terminal section of the abdominal aorta and/or the initial section of the inferior vena cava due to its mixing to the left, which improved hemodynamics in these areas. The postoperative period in the operated patients passed without signs of disruption pregnancy and intrauterine development of the fetus. This position of the pregnant woman may be recommended in bed to maintain pregnancy and prevent SHSP.

Keywords: Pregnancy, Hypotension Syndrome on the Back, Surgical Interventions, Local Anesthesia, Rehabilitators