**Background and Goal of Study:** Women in the third trimester of pregnancy reported mild impairments in their focused and divided attention ability and their ability to remember what they had read compared with the non-pregnant women. The postoperative cognitive dysfunctions can take place after caesarean section and vaginal delivery in obstetrics, and have sad results for both mother and child.

**The aim** of this article is to study the influence of bispectral index on parturients’ cognitive functions during total intravenous anesthesia for cesarean section. After local ethics committee approval and obtained informal consent, 32 parturients are inspected in 37-42 gestation weeks whose have delivered by the caesarian section under the total intravenous anesthesia. Plugging criteria in research: age 18-45, gestation 37-42 weeks, caesarian section (elective or urgent), and compensated extragenital pathology. Criteria of exception were: age to 18 and 45 more than, term of pregnancy to 36 weeks, severe preeclampsia or eclampsia, decompensated extragenital pathology, diabetes mellitus, psychical diseases, signs of bacterial or viral infection, mycoses, abandonment of woman from participating in the research at any of it stages, use ketamine in an anesthetic prescriptions. TIVA technique was [8]: induction — thiopental sodium (4 mgs/kg), relaxation — suxcinilcholinum (1-1,5 mgs/kg). Anaesthesia controlled by BISX Module, BIS™ Covidient, USA. We used Montreal Cognitive Assessment (MoCA) test for cognitive functions investigation, “Matching digits and letters” test for control functions, Luria’s memory test for memory. Control points for cognitive functions was: 1 — upon admission to the obstetrical department (P1), 24hours after the surgery (P2), on the 3d day after the surgery (P3), on the 5-7th day after the surgery (P4). We used the minimum and maximal BIS indexes of monitor during the surgical stage of anesthesia for the estimation of bispectral index. Duration of the caesarian section was 27.5 (23; 37.25) min. The operation and the anesthesia had no any complications. For all the patients postoperative pain was less than 30-40 mm on VAS.

**Results and conclusions.** It was shown cognitive functions remain decreased by day 5-7 at TIVA. That is the consequence of pregnancy influence on them. The study showed cognitive functions go down to the moment of delivery or at 37-42 weeks of gestation. There are significant wavering in interval of BIS 30.5 to 76.5 during total intravenous anesthesia for cesarean section. Minimal means of BIS correlated with the start cognitive function levels. Low minimal BIS leads down the cognitive functions during total intravenous anesthesia. However do not decrease memory in parturients on 5-7 day after surgery. Increasing of Thiopental dose for anesthesia maintenance increases max BIS means, however increasing of Thiopental dose for anesthesia induction correlated with low BIS maximal.