Introduction:
Intracranial hemorrhage is a rare & serious complication with high mortality of HELLP syndrome (hemolysis, elevated liver enzymes & low platelet count). The aim of this study is to find the significant predictor of intracranial bleeding in the HELLP syndrome patient admission to the ICU.

Methods:
This prospective observational study was done in all obstetric patients admission to the general SICU of a tertiary university hospital during Jan 2013-Oct 2017. Data recording include patient demographic data, comorbidities, parity, ASA status, perioperative antihypertensive medication & BP, intraoperative blood loss, type & amount of fluid/blood & blood component, perioperative data: Hb, platelet count, liver function, coagulogram (PT, INR, fibrinogen), perioperative adverse event, ventilator/ICU days & ICU mortality.

Results:
There were 115 HELLP patients out of 422 obstetric patients admitted to the ICU. 19 HELLP patients (16%) developed intracranial hemorrhage during ICU admission with the severity started from small to massive intracranial hemorrhage who need craniotomy with clot removal. 17 patients (36%) die. One patient survived from massive intracranial hemorrhage after wide craniectomy & therapeutic hypothermia went home with mild hemiparesis. 3 patients developed intracranial hemorrhage on the day 3-4 after delivery. All patients still have elevated liver enzyme during hemorrhage. HELLP patients who had intracranial hemorrhage were significant (p<0.05) older, poor perioperative blood pressure control, lower platelet and fibrinogen, higher INR ratio & liver enzyme.

Conclusion:
Intracranial hemorrhage in HELLP patient is a high morbidity & mortality. Tight BP control & correction of platelet, fibrinogen, INR are needed during the peripartum period until the liver dysfunction come back to normal.