

## An hypertensive crisis post caesarean section valuated by UltraSonic Cardiac Output Monitoring (USCOM): a case report

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**Background.** Cardiac output (CO) is a better indicator of uteroplacental flow compared to non-invasive blood pressure (BP) and helps us to untangle the structural and functional changes of pregnant woman's cardiovascular system. Hypotension after spinal anaesthesia for caesarean section (CS) remains a frequent condition but the persistent increase in SVR is an independent predictor for the development of hypertensive disorders in pregnancy.

**Case presentation.** We performed a haemodynamic evaluation by UltraSonic Cardiac Output Monitoring (USCOM) in patients who underwent CS by standardized anaesthesia and obstetric procedure. This case report relates a 32 years old, 38<sup>th</sup> WG, BMI 36 kg/m<sup>2</sup>, PROM, transverse presentation, 3 previous CS and 1 abortion, hyperuricemia on therapy, no gestational complications, normal blood tests before surgery. The

patient presented with hypertension before spinal anaesthesia with high SVR and high CO. SVR collapsed after the spinal anaesthesia before returning to high values that persisted at 2h, with the later development of symptomatic hypertension. The USCOM evaluation integrating SVR allowed to start an early antihypertensive therapy and indicate cardiological referral, important actions to prevent postpartum complications. **Conclusions.** Abnormally high SVR values are indicative of hypertension and preeclampsia and other maternal-foetal complications much earlier than any other symptoms or simple BP measurements and can even precede alterations in blood tests. Unrecognized cardiovascular disease causes increased mortality, therefore is important to identify women at risk and personalize therapy tailored on the patient's haemodynamic profile.