fifth childbirth. She had Ceasarean section before and epidural analgesia for vaginal delivery as well.

**Results** The patient was haemodynamically stable during all birth stages.

After spontaneous vaginal delivery and placental removal the patient started to bleed excessively from the uterus.

First laboratory results showed Plt 60 and coagulation parameters showed signs of DIC (PT 16, APTT 69,3, fibrinogen < 0,4)

Obstetrics team concluded the bleeding was due to uterine atony and carried out according to the protocol. The patient received oxytocin, tranexamic acid, prostaglandine derivates and balloon tamponade was performed. Total average blood loss was about 3 litres.

Intensive therapy included administration of fresh frozen plasma, cryoprecipitate, red blood cells concentrates, platelets and recombinant factor VII.

During all obstetrical procedures the patient was in full contact, haemodynamically stable, there weren't neurological signs observed and pain relief was managed by the epidural catether. The patient had one hypotensive episode which was corrected with single administration of Phenylephrine.

**Conclusions** After administration of 1 mg of recombinant factor VII the patient's bleeding has stopped instantly with improved laboratory coagulation results, thus earlier decided urgent hysterectomy procedure was prevented and there weren't complications of epidural analgesia.

## B275 SPECIFIC FEATURES SEDATION FOR SPINAL ANESTHESIA DURING CESAREAN SECTION WITH SEVERE CORONAVIRUS PNEUMONIA

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**Background and Aims** Spinal anesthesia (SA) is the main type of anesthesia for caesarean section (SC). COVID-19 pneumonia which complicates the course of pregnancy, requires a rational choice of sedation and respiratory support to ensure SA.

**Methods** The safe conduct of SA was ensured by the temporary discontinuation of the use of heparinoids in the perioperative period. SA was performed exclusively in the sitting position, then the patient was transferred to the horizontal position with the head end elevated by 30–45 degrees (depending on the needs). Respiratory support was used at all stages of preparation, performance, and administration of anesthesia: high-flow oxygenation (HFO) through nasal cannula or face mask, and noninvasive mechanical lung ventilation through the face mask. Maintenance of normotension was provided by intravenous boluses phenylephrine. Sedation was provided by intravenous bolus small doses of propofol or ketamine.

**Results** The above-described features of SA were used by us during CS in 30 women in labor with severe coronavirus pneumonia. Compliance with the characteristics of SA for CS by coronavirus pneumonia was expressed in the following:

1) sitting position - half sitting at all stages of the perioperative period;

2) constant respiratory support, mainly HFO;

3) early transfer to the pron-position in the postoperative period;

4) predominant use 50–75 mg ketamine (not propofol) for sedation during CS

This approach ensured that there was no need to use general anesthesia with tracheal intubation for CS.

**Conclusions** Supplemented with HFO, ketamine sedation, half-sitting SA is the method of choice for providing CS in labor with severe coronavirus pneumonia.

## B276 PURINES OF BLOOD, CEREBROSPINAL FLUID, AND THE QUALITY OF SPINALANESTHESIA FOR CESAREAN SECTION IN WOMEN IN LABOR WITH COVID-19

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**Background and Aims** Explore the relationship of indicators purine spectrum of blood, cerebrospinal fluid and the characteristics of spinal anesthesia for cesarean section in women in labor with COVID-19.

**Methods** We examined 30 pregnant women, who before starting spinal anesthesia for cesarean section was performed over the fence of venous blood, in the performance of spinal anesthesia (before the introduction of anesthesia) - fence CSF. Purines was determined by direct spectrophotometry. Take into account the following characteristics of spinal anesthesia administered dose of spinal bupivacaine mg, speed of onset, depth and height of the spread of spinal block, the need for additional administration of intravenous analgesics and anesthetics. Using parametric and non-parametric correlation analysis, nonparametric comparisons of two groups by Mann-Whitney U Test.

**Results** Dose spinal bupivacaine significantly positively correlated with serum levels of guanine, hypoxanthine, adenine and xanthine. Time of onset of adequate spinal block significantly correlated positively with the level of serum guanine, hypoxanthine, and block height - with a negative concentration guanine and xanthine. Mothers with high-quality, adequate spinal block, which do not require the additional use of intravenous anesthetics differed from women with a low, not enough adequate spinal block, a lower concentration of guanine in blood serum.

**Conclusions** The level of guanine in blood serum can be used to predict the quality of spinal anesthesia in obstetrics with COVID-19, and possibly to define indications for preemptive use of combined spinal-epidural or general anesthesia instead of the single-stage single-dose spinal anesthesia.

## B277 NOREPINEPHRINE INFUSION FOR PREVENTION OF MATERNAL HYPOTENSION. WHICH FLUIDS AND WHEN?

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**Background and Aims** The aim of this randomized study was to investigate the combination of a norepinephrine infusion and colloid preloading versus the combination of a norepinephrine infusion and crystalloid co-loading for the prevention

of maternal hypotension during elective cesarean section under combined spinal-epidural anaesthesia

**Methods** After Ethics Committee approval, one hundred parturients were randomized to receive either 6% hydroxyethyl starch 5 mL/kg before spinal anesthesia (colloid preload) or Ringer's Lactate solution 10 mL/kg starting with intrathecal injection (crystalloid co-load). Both groups were also administered norepinephrine 4 μg/min, starting simultaneously with the administration of the subarachnoid solution. The primary outcome was the incidence of maternal hypotension (SBP<80% of baseline). The incidence of severe hypotension (SBP<80 mmHg), total dose of ephedrine administered as well as maternal side-effects and the neonatal outcome were also recorded

**Results** There were no significant differences in the incidence of hypotension (13.7% vs. 16.3%, p=0.933 or severe hypotension (0% vs. 4%, P=0.238) between colloid preload and crystalloid co-load groups, respectively. The median [range] ephedrine dose was also comparable between the two groups (P=0.807). There were no significant differences in maternal side-effects or neonatal outcomes between groups

**Conclusions** The incidence of hypotension during elective cesarean section is low and comparable when a norepinephrine infusion is used in combination with either colloid preload or crystalloid co-load, with perhaps a marginal superiority of colloid preload in the prevention of severe hypotension. It appears that the optimal regimen for prevention of maternal hypotension is a combination of fluids and a prophylactic vasopressor like norepinephrine

## B278 COLLOID CO-HYDRATION IN MATERNAL HYPOTENSION: DOES THE ADDITION OF A VASOCONSTRICTOR MAKE A DIFFERENCE?

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**Background and Aims** This study aimed to investigate whether the addition of a fixed rate phenylephrine infusion or noradrenaline infusion to a colloid co-hydration regimen results in better maternal hemodynamic status as compared to the administration of colloids alone without any vasoconstrictor during elective cesarean section under combined spinal-epidural anesthesia

**Methods** 120 parturients were randomized to either phenylephrine 50 μg/min (group P) or noradrenaline 4 μg/min (group N) or placebo (group C). As soon as the spinal injection started, all groups were administered 10 mL/kg of hydroxyethyl starch solution simultaneously with the onset of vasoconstrictor infusion. The primary end-point of the study was the incidence of maternal hypotension (SAP<80% of baseline)

**Results** The incidence of maternal hypotension was higher in group C than in both groups P and N (p=0.011 and p<0.001, respectively). The incidence of bradycardia was higher in group P than in group N (p=0.018). The incidence of reactive hypertension was higher in group P than in both groups N and C (p=0.029 and 0.005, respectively).The need of modification of the infusion rate was higher in group P than in both groups N and C (p<0.001 και p=0.002, respectively). Post-delivery Apgar scores were similar in all groups

**Conclusions** The combination of a fixed-rate infusion of noradrenaline with the co-administration of colloid seems to be the most effective in the management of the parturient during cesarean section, being superior to either a combination of colloid co-administration with a fixed rate of phenylephrine or to the administration of colloid alone without any vasoconstrictor agent

## B279 AN OBSTETRIC ANAESTHETISTS' ASSOCIATION (OAA) SURVEY OF THE USE OF ULTRASOUND SCANNING TO ASSIST WITH CENTRAL NEURAXIAL BLOCKS IN OBSTETRIC ANAESTHESIA

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**Background and Aims** Central Neuraxial Blocks (CNBs) are key to obstetric anaesthetic practice. They are performed by landmark technique, however, there is increasing evidence supporting the use of ultrasound-assisted CNBs[1, 2].

This survey aims to explore:

- Current use of ultrasound-assisted CNBs
- Current training being delivered
- Barriers to training

**Methods** We conducted an OAA-approved national survey of UK obstetric anaesthetists in 2021, with 394 completed responses.

**Results** 86% of responders were consultant obstetric anaesthetists. 69% said they perform ultrasound-assisted CNBs, but some only in specific circumstances (Figure 1). 40% do not use ultrasound at all due to lack of training or lack of confidence in the technique.

Figure 1
**Circumstances in which spinal ultrasound is used by anaesthetists for CNB**

| Special circumstances when ultrasound used | Number of responses |
|---|---|
| Difficulty with CNB | |
| • Failed attempts | 75 |
| • Failed attempts by colleague | 13 |
| • Failed attempts and if another colleague able to perform neuraxial ultrasound | 7 |
| History of difficulties / complications | |
| • Previous difficult CNB | 49 |
| • Epidural Blood Patch | 2 |
| • Previous Accidental Dural Puncture | 1 |
| • Resiting failed epidural | 3 |
| Predictors of difficult CNB | |
| • Obesity | 74 |
| • Obesity (class 2 or above) | 37 |
| • Obesity and difficulty palpating anatomical landmarks | 57 |
| • Scoliosis | 56 |
| • Previous spinal surgery | 16 |
| Higher risk of complications from CNB | |
| • Low BMI (risk of Accidental Dural Puncture) | 3 |
| • Borderline coagulopathy | 2 |
| Teaching / training purposes | 44 |
| Elective cases | 2 |

**Abstract B278 Figure 1**