

local infiltration of ropivacaine, a day after knee joint arthroplasty operations with spinal anesthesia.

**Introduction:** Inadequately chosen postoperative anesthesia method after knee joint arthroplasty surgery might cause prolonged hospitalization period, readmissions due to pain and overall increased cost of care.

**Methods:** In 2016 a prospective research was conducted in Vilnius University Hospital Santaros Clinics. 25 patients undergoing knee joint arthroplasty surgery with spinal anesthesia were enrolled in the study. Group1 – local soft tissue ropivacaine infiltration anesthesia around the knee ( $n=13$ ; dose 300 mg); Group2 – intrathecal morphine sulfate analgesia ( $n=12$ ; dose 0.1–0.2 mg). Pain intensity (using VAS) at rest and in motion, patient's satisfaction and side effects – nausea, vomiting, itch, urinary retention – were assessed at time intervals – 1, 2, 4, 6, 12, 18, 24 h postoperatively.

**Results:** In the first 12 h mean values of VAS were  $1.8 \pm 2.6/1.4 \pm 1.7$  in Group1 and Group2 accordingly. After 12 h period a downtrend occurred and values were  $1.7 \pm 1.1/1.1 \pm 1.5$ , respectively ( $p > 0.05$ ). Examining pain in motion 12 h after the surgery pain intensity values were  $2.5 \pm 2.7/3.3 \pm 2.7$  and after 24 h in both groups pain intensity was  $3.2 \pm 1.5/3.6 \pm 2.1$ , resp. ( $p > 0.05$ ). Zero episodes of nausea/vomiting were registered in Group1, while 58.3% ( $n=7$ ) of Group2 patients experienced nausea and 5 of them also vomited. Even 66.7% ( $n=8$ ) patients in Group2 had itch while none patients of Group1 indicated this side effect. It was difficult to assess urinary retention as 30.8% ( $n=4$ ) Group1 and 66.7% ( $n=8$ ) Group2 patients were catheterized prior surgery. Finally, satisfaction level of both groups were evaluated very similarly:  $8.2 \pm 1.7/8.2 \pm 1.3$  ( $p > 0.05$ ).

**Conclusion:** VAS values at rest were very similar in both groups, but pain relief efficiency compared to the intensity of pain during movement was better with local ropivacaine infiltration, also patients with ropivacaine analgesia experienced no side effects.

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## PS134

### The role of cerebroplacental ratio in prediction of neonatal outcomes and route of delivery



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**Aim:** The aim of our study was to check the appropriability of cerebroplacental ratio (CPR) measured within 48 h before delivery in prediction of route of delivery and adverse neonatal outcomes.

**Introduction:** The cerebroplacental ratio is an important obstetric ultrasound tool used for assessment of foetal oxygenation. It is also a valuable predictor of adverse pregnancy outcomes. CPR is calculated by dividing the Doppler pulsatile indices of the middle cerebral artery (MCA) and the umbilical artery (UA).

**Methods:** The retrospective study included 1328 pregnant women who gave birth in Department of Obstetrics and Perinatology Jagiellonian University Medical College, Cracow, Poland. Main inclusion criteria were: singleton pregnancy and the interval between ultrasound examination and delivery within 48 h. Exclusion criteria consisted: active labour, multiple pregnancy, preeclampsia, foetal growth restriction and evidence of intrauterine infection. CPR value lower than 1.08 was classified as pathological. Participants were divided into 2 groups: control

( $CPR \geq 1.08$ ,  $n=1228$ ) and study ( $CPR < 1.08$ ,  $n=100$ ). The differences in socio-demographic factors between control and study group were not statistically significant. Data were analysed using chi-squared test, independent sample 2-tailed T-test and logistic regression.  $p$  value  $< 0.05$  was statistically significant.

**Results:** In study group was observed statistically significant increased risk of delivery provided by cesarean section ( $OR=1.8$ ;  $p=0.015$ ), preterm delivery ( $OR=2.91$ ;  $p=0.0001$ ), birth weight  $< 2500$  g ( $OR=5.87$ ;  $p<0.00001$ ) and APGAR score  $< 7$  in 1st ( $OR=6.56$ ;  $p<0.0001$ ), 3rd ( $OR=7.04$ ;  $p<0.0001$ ) and 5th ( $OR=5.4$ ;  $p=0.017$ ) minute after delivery, compared to control group. Moreover, low CPR was associated with lower incidence of foetus birth weight within normal limits ( $OR=0.37$ ;  $p<0.0001$ ) and on-term delivery ( $OR=0.61$ ;  $p<0.0001$ ).

**Conclusion:** Detection of low value of CPR in every case should be alarming signal for obstetrician. Normal CPR appears to suggest better foetal tolerance to the stress of labour. CPR may be used to stratify the risk of pregnancy before labour.

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## PS072

### Chronic subdural hematoma in aging population – How the age influence the outcome after surgical treatment



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**Aim:** The aim of our work is to examine how the age influence the outcome after surgical treatment of chronic subdural hematoma.

**Introduction:** Chronic subdural hematoma (CSDH) is a common condition, characterized by the collection of hemolyzed blood between dura and arachnoid mater of the brain surrounded by two pathological hematoma membranes – internal and external. The number of CSDH incidence increases with age and it is why more attention should be directed for surgical treatment in elder patients group.

**Methods:** Data on management and outcomes for patients with CSDH were collected retrospectively from years 2014–2017 and investigated using statistic methods. The study group was divided into two subgroups according to the age:  $< 75$  years and  $\geq 75$  years old. Age, gender, comorbidities, neurological status on admission and at discharge, pre-/postoperative epilepsy, surgical technique were investigated.

**Results:** We analyzed 257 patients with a diagnosis CSDH. Analyzed subgroups have not differ significantly except the gender and concomitant diseases according to the Chi2 and exact Fisher tests. We found craniotomy in patients  $\geq 75$  years old increases the risk of postoperative epilepsy comparing to the bur-hole (logistic regression analysis: 9.8 [95% CI: 1.9–49.8],  $p=.006$ ), same as the internal hematoma membrane removal during surgery (logistic regression analysis: 10.3 [95% CI: 2.0–52.15],  $p=.005$ ). These dependencies do not occur in the younger age group. Type of treatment have not influenced the mRS in patients younger than 75 years old. In elder patients reoperation and removal of the internal membrane of the hematoma worsened outcome measured in mRS (logistic regression analysis: 5.5 [95% CI: 1.4–20.90],  $p=.013$  and 3.1 [95% CI: 1.4–7.2],  $p=.007$ ).

**Conclusion:** Craniotomy and internal membrane removal increase the risk of epilepsy in elder CSDH patients. Reoperation

and hematoma internal membrane removal are the risk factors of unfavorable outcome in patients  $\geq 75$  years old.

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### PS103

#### The frequency of MINS (Myocardial Injury after Noncardiac Surgery) and others postoperative complications in different age groups of elderly patients who underwent endovascular aortic repair because of abdominal aortic aneurysm

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**Aim:** The aim of our study was to estimate frequency of MINS and others complications after endovascular aorta repair because of AAA in different age groups.

**Introduction:** Nowadays, endovascular aneurysm repair (EVAR) is the most common technique for repair of abdominal aorta aneurysm (AAA). This procedure involves less complications than open surgery, nevertheless they still occurs.

**Methods:** The study group consisted of 143 patients (85.3% men), aged  $76.8 \pm 7.7$  with AAA who had endovascular aneurysm repair between January 2015 and May 2017 in the Department of Vascular Surgery and Angiology. Patients were divided into two groups depending on age: group I  $\leq 75$  years (60 patients, aged  $69.3 \pm 4.5$ ), group II  $> 75$  yrs (83 patients, aged  $82.2 \pm 4.2$ ). We considered coexistent diseases, some laboratory tests and Revised Cardiac Risk Index for Pre-Operative Risk (Lee index). Statistical analysis was performed with U Mann-Whitney and Chi2 tests.

**Results:** The study groups were comparable regarding the coexistent diseases and preoperative risk. Older patients had higher mean creatine level on admission than younger patients (group I:  $103.29 \pm 84.10$  vs. group II:  $118.5 \pm 61.9$   $\mu\text{mol/l}$ ,  $p < 0.005$ ) and lower eGFR ( $80.6 \pm 27.6$  vs.  $61.61 \pm 21.9$  vs.  $1.73$   $\text{ml/min/m}^2$ ,  $p < 0.001$ ). The mean concentration of haemoglobin and amount of white blood cells were also lower in elderly patient ( $13.19 \pm 1.93$  vs.  $12.9 \pm 18.3$   $\text{g/dl}$ ,  $p = 0.01$ ;  $8.23 \pm 2.74$  vs.  $7.49 \pm 2.7 \times 10^3/\mu\text{l}$ ,  $p = 0.04$ ).

Frequency of some complications such as acute kidney injury, pneumonia, sepsis, stroke or intrahospital mortality were similar in both groups.

However, we observed a statistically significant difference in the frequency of MINS (26.67% vs. 45.78%;  $p = 0.04$ ). Older patients also needed red blood cells concentrate transfusion after surgery more often than younger (6.67% vs. 19.28%;  $p = 0.03$ ).

**Conclusion:** MINS is the most common complication after EVAR. Age seems to be a significant feature which increases the frequency of MINS in compared groups despite similar coexistent diseases and preoperative risk assessment determined by Lee index.<sup>1-3</sup>

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### PS210

#### Evaluation of clinical characteristics as indicators for shunt procedure in patients with medulloblastoma



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**Aim:** Determining clinical characteristics and parameters reliable as predictors of the need for the shunt installation and their relation to the treatment outcome.

**Introduction:** Medulloblastoma represents the most common pediatric tumor, that most frequently involves posterior cranial fossa and often manifests as hydrocephalus. Current therapy involves tumor excision and posterior cranial fossa decompression, with or without temporary external drainage of cerebrospinal fluid, endoscopic ventriculocisternostomy and ventriculoperitoneal (VP) shunt placement.

**Methods:** This retrospective study included 36 patients treated in the period from January 1st 2007 to December 31st 2015 in the Clinic of Neurosurgery, Clinical Center of Serbia. Basic demographic data, symptoms and signs at admission, degree of tumor resection and disease outcome information were analyzed.

**Results:** 22 patients (61.1%) were male and 14 (38.9%) were female, most of them 4–14 years old (58.3). Sex and age showed no significant correlation with VP shunt installation, or timing of shunt installation. VP shunt was installed in 92% of patients, in 33.3% prior to and in remaining after surgery. The most frequently observed symptoms on admission were cerebellar symptomatology (91.2%), headache (75.7%) and vomiting (68.5%), which showed no significant correlation with the VP shunt installation and shunt installation timing. In 83% of patients total resection was achieved. The degree of tumor resectability and VP shunt installation were significantly related ( $p < 0.001$ ). Correlation among shunt installation and treatment outcomes, as well as the shunt installation timing and outcome showed a statistical significance ( $p < 0.001$ ).

**Conclusion:** No clinical characteristics reliable as prognostic parameter for VP shunt installation in medulloblastoma patients have been found. Shunt placement is recommended in all cases of incomplete tumor resection, unless already placed preoperatively. Patients with a shunt placed prior to surgery have had significantly better outcome.<sup>1-35</sup>

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