CAESAREAN SECTION ANESTHESIA: WHAT DO WE IMPORTANCE OF PURINE METABOLITES IN

Background and Aims Neuroaxial techniques (NT) are commonly used for pain relief during labor. Many modalities have been introduced, each with advantages and disadvantages. The choice of the ideal approach is debatable and could be linked to various factors. We examined the factors associated with the choice of NT among a sample of parturients in Bissaya Barreto Maternity.

Methods This is a retrospective, observational study of all patients (n=598) who had caesarean section (c-section) during 2022. Data were obtained from anonymous clinical records. Data collected included anesthetic approach technique, urgency of the c-section, previous presence of active labor, BMI of the parturient and APGAR score of the newborn. A chi squared (Q) analysis and adjusted residuals (AR) were used to reveal the association between variables.

Results A total of 598 c-sections were done: 556 (93%) with NT and 42 (7%) under general anesthesia (GA). There was no association between the choice of NT and the BMI of the parturient (Q 26,35;p 0,15) or APGAR score (Q 42,11;p 0,11). In the absence of labor there were higher than expected counts of combined anesthesia (AR 3,9; p<0,01) and lower epidurals (AR -5,7;p<0,01). If spontaneous or induced labor, epidural was chosen in higher counts than expected (AR 3,0 and 3,1 respectively). Emergent c-sections were positively associated with GA (AR 7,7;p<0,01).

Conclusions GA was positively associated with emergent c-section. Epidural was negatively associated with elective c-sections and the absence of labor which was positively associated with combined anesthesia. BMI and APGAR were not related to the choice of anesthesia.

IMPORTANCE OF PURINE METABOLITES IN PREECLAMPSIA AND ACUTE BRAIN STROKE

Background and Aims Along with the edema, proteinuria, hypertension, many clinicians as indicator of preeclampsia using high content of uric acid in blood serum – hyperuricemia. It was also found that the hypoxanthine, xanthine and uric acid (UA) are present in the brain, UA is end product of purine degradation in the brain, and then in UA and can be a source of free radicals, endogenous increased production, with the side synthesis of xanthine oxidase oxygen free radicals, reflects the severity of ischemic and reperfusion injury. Our attention was attracted by a comparative assessment of the features of purine metabolism in women with preeclampsia and acute brain stroke.

Methods The study involved 33 women with preeclampsia and 350 women in acute period of cerebral stroke, in which, in addition to conventional laboratory parameters were determined in blood and cerebrospinal fluid – guanine, hypoxanthine, adenine, xanthine and uric acid by direct spectrophotometry.

Results It was established that between preeclampsia and cerebral stroke there are clinical and pathobiochemical parallels, including according to the characteristics of purine metabolism. Hyperuricemia the most famous and at the same time the most pronounced adverse metabolic factor (marker or predictor) for preeclampsia, and for cerebral stroke. High value level of oxypurines (hypoxanthine, xanthine and uric acid) in the cerebrospinal fluid is good sign for a stroke, and low value level of oxypurines is good sign for preeclampsia.

Conclusions Cerebrospinal liquor can be seen not only medium of administration of drugs for spinal anesthesia, but also a source of valuable diagnostic (and predictive) information.

ILIOinguinal block with liposomal bupivacaine for lower extremities revascularization: have we found the ‘right’ block?

Background and Aims As part of multimodal analgesia techniques, regional anesthesia plays a crucial role in reducing opioids usage. The aim of our study was to analyze the efficacy of intraoperative ilioinguinal block with liposomal bupivacaine (IIB/LB) in reducing intra- and post-operative use of narcotics in lower extremities vascular surgeries.

Methods We reviewed the clinical data of 107 patients who underwent elective lower extremities vascular surgeries at our institution from January 2017 to December 2022. Patients were divided into two groups: Group I (n=41 [38%]) received an intraoperative IIB/LB; Group II (n=66 [62%]) did not receive regional anesthesia. Endpoints included procedural metrics, intra- and post-operative narcotic use at 12, 24, 48 and 72 hours after surgery.

Results Both groups had similar demographics and operative indications. Median dose of intraoperative opioids in IV morphine equivalents was lower for Group I versus Group II (22.5 ± 10.1 vs 28.4 ± 12.2, P=0.01). Median postoperative IV morphine equivalents were lower for Group I versus Group II (at 12h 81.5±36.1 vs 108.1±44.5, P <0.001; at 24h 88.5±45.3 vs 125.4± 54.9, P <0.001; at 48h 121.7±75.2 vs 161.8±78.6, P=0.02; at 72h 121.7±76.1 vs 199.8±109.4, P<0.001). There were no significant differences in mortality or major adverse events between the two groups.