

Category :**Sedation - analgesia**

A62 - Intravenous lidocaine during craniotomy does not blunt inflammatory response to surgery

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Introduction:

Intravenous lidocaine has demonstrated to attenuate the proinflammatory effects associated with surgery, in addition to its analgesic properties [1]. Effective modulation of the inflammatory response may improve outcomes for patients undergoing craniotomy. We hypothesized that intravenous lidocaine would attenuate the inflammatory response to craniotomy, measured using widely available biomarkers (neutrophil to lymphocyte ratio [NLR] and platelet to lymphocyte ratio [PLR]).

Methods:

A retrospective cohort study was conducted included patients at least 18 years old undergoing craniotomy under general anesthesia from January 2015 to December 2019. Exclusion criteria were simultaneous procedures, fever, sepsis, and intraoperative vasopressors. Anesthesia technique was standardized. Lidocaine use was at the discretion of the anesthesiologist. NLR and PLR were measured before and 24 hours after surgery. The primary outcome was a reduction in biomarkers in the patients exposed to lidocaine. Secondary outcomes were ICU stay, postoperative septic shock, and mortality 20 days after surgery.

Results:

A sample of 165 patients was analyzed, and 84 (50.9%) of them were exposed to lidocaine. Preoperative and 24-hour postoperative values of NLR and PLR were similar between groups of patients. There were no differences in ICU length of stay, opioid consumption, incidence of septic shock, and mortality. Patients who received intraoperative lidocaine had less opioid consumption than those who were not exposed ($p < 0.01$).

Conclusion:

Intravenous lidocaine during craniotomy did not blunt the inflammatory response associated with this procedure. However, less opioid consumption was associated with intraoperative infusion of this local anesthetic.

References:

1. Dunn LK, et al. Anesthesiology 126:729-737;2017.