

Category :**Hematology: Other**

A64 - Behavior of systemic inflammatory markers in patients undergoing craniotomy for tumor resection

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Introduction:

Neoplasms generate an inflammatory response associated with poor survival. Neutrophil/lymphocyte ratio (NLR) and platelet/lymphocyte ratio (PLR) are widely available, inexpensive, and their elevation has been associated with decreased survival in solid tumors [1]. We aimed to describe the behavior of these inflammatory markers in patients scheduled for intracranial tumor resection.

Methods:

A retrospective cohort study was conducted. Patients at least 18 years old undergoing craniotomy for tumor resection between January 2015 and March 2019 were included. We excluded patients if programmed for reintervention, presented sepsis, or had previous corticosteroid use. Demographic and tumor characteristics were recorded, in addition to preoperative NLR and PLR. Inflammation was defined as NLR >3 and PLR >200. Descriptive statistics and bivariate analysis were used as appropriate.

Results:

A sample of 322 patients was analyzed, of which 53% had benign tumors and 47% had malignant pathology. Preoperative inflammation defined by NLR was present in 44% of patients, whereas 22% had inflammation according to PLR. Demographic variables did not differ between patients with and without inflammation. Inflammation by NLR was more common in patients with supra and infratentorial tumors, than in patients with pituitary tumors (p=0.003). NLR >3 was also associated with preoperative cerebral edema (p=0.01), hypertension (p=0.05), heart failure (p=0.047), and dementia (p=0.037). PLR was not associated with the evaluated variables.

Conclusion:

Preoperative inflammation defined as NLR >3 was associated with supratentorial and infratentorial tumors, as well as comorbidities such as cerebral edema, hypertension, heart failure and dementia. PLR was not associated with preoperative variables.

References:

1. Templeton AJ, et al. J Natl Cancer Inst 106:dju124,2014.