

The Predictive value of Preoperative Inflammatory Biomarkers in patients with Gallbladder Carcinoma

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Objectives

Systemic inflammatory biomarkers, including lymphocyte to monocyte ratio (LMR), neutrophil to lymphocyte ratio (NLR), and platelet to lymphocyte ratio (PLR) have been used as a prognostic marker for various cancers



Objectives

We aimed to analyze the potential predictive value of LMR, NLR and PLR in gallbladder carcinoma (GBC) patients who underwent cholecystectomy



Methods

76 patients with histologic confirmed GBC who underwent curative surgery in our medical center were retrospectively enrolled in this study. The association between systemic inflammatory biomarkers including LMR, NLR and PLR and the degree of GBC including TNM staging, lymph node (LN) metastasis and histologic grade was investigated.



Methods

The demographics, clinical, laboratory and histopathology data were analyzed. The Cox regression proportional hazard model and Kaplan–Meier method were used to assess prognostic value.



Results

The higher LMR was significantly associated with the lower TNM stage ($p=0.022$), but not with LN metastasis and histologic grade. Whereas NLR and PLR were not associated with previous three variables. Ages under 60 were significantly correlated with elevated LMR and decreased NLR. The presence of abdominal pain was significantly correlated with decreased LMR and increased NLR and PLR.



Results

No significant difference of the other clinicopathological variables with these inflammatory biomarkers was found. The cutoff values of 3.35 was defined as high LMR. There were significant differences in age, presence of abdominal pain, albumin, and TNM stage between the low LMR group and high LMR group.



Results

The mean survival time was 12 months longer (93 vs 81 months) in the high LMR group than in the low LMR group, but there was no significant difference between two groups ($p = 0.787$).



Conclusions

Among preoperative inflammatory biomarkers, **LMR** has the most **predictable value** for patient with GBC.

In particular, **high LMR** can be used as a **predictor of good prognosis** in patient with GBC undergoing surgery.

