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COMMENTARY

Prognostic value of biomarkers in primary small cell carcinoma of the esophagus

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We recently read the article by Wang *et al.*[1] with great interest. The aim of this article was to determine the prognostic role of several pretreatment biomarkers, including the neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR) and total lymphocyte counts (TLC), in primary small cell carcinoma of the esophagus (SCCE). We performed a similar analysis using the data from our hospital and different and novel findings were exhibited. Therefore, we would like to discuss several worthwhile issues.

Wang *et al.* included 73 SCCE patients from the Affiliated Cancer Hospital of Zhengzhou University and demonstrated that pretreatment PLR were independent prognostic factors for SCCE patients (hazard ratio [HR] = 1.751; 95% confidence interval [CI]: 1.042–2.945; $P = 0.035$).[1] We also conducted a retrospective study with similar inclusion and exclusion criteria in our hospital. A total of 88 patients diagnosed with SCCE from 1 June 2010 to 31 July 2019 were enrolled, with a median follow-up time of six months (range 1–91 months). In addition to the indicators mentioned above, we explored the prognostic values of several immunohistochemical indicators, including the CD56, Syn, CK5/6, CgA, TTF-1, Ki-67and P63, and pretreatment laboratory biomarkers, including red cell distribution width (RDW), lymphocyte-to-monocyte ratio (LMR), glutamic oxalacetic transaminase/alanine aminotransferase (AST/ALT), albumin-to-globulin ratio (AGR), lactate dehydrogenase (LDH) and albumin-to-fibrinogen ratio (AFR).

However, in our study, only low pretreatment AFR (≤12.36) was verified to be an independent prognostic risk indicator (HR = 3.487, 95% CI: 1.179–10.312; $P = 0.024$). The NLR (HR = 1.022, 95% CI: 0.456–2.290; $P = 0.958$) and PLR (HR = 1.479, 95% CI: 0.587–3.728; $P = 0.406$) were not associated with OS of SCCE patients and their optimal cutoff values were 3.75 and 93.81 in our study. Even after we separately determined their thresholds as 2.37 and 136.5, the NLR (HR = 1.129, 95% CI: 0.336–3.798; $P = 0.845$) and PLR (HR = 0.663, 95% CI: 0.276–1.594; $P = 0.359$) were still not related with the prognosis in SCCE. Therefore, whether pretreatment NLR and PLR could serve as promising prognostic biomarkers in SCCE patients and their optimal cutoff values still need to be further determined.

In addition, we suggest that Wang *et al.* could conduct further analysis to explore the prognostic roles of other laboratory indicators, particularly the AFR. We hypothesize that AFR could show higher prognostic value than NLR and PLR because it combines the nutrition and inflammation factors and both low serum albumin and high fibrinogen concentrations indicate poor survival in cancer patients.[2–5]

Furthermore, the immunohistochemical biomarkers mentioned above should be taken into consideration. Deng *et al.* indicated that high Ki-67 expression was an independent favorable prognostic factor for SCCE patients who underwent esophagectomy with lymphadenectomy.[6] However, a negative relationship has been observed in our research.

To date, the management and treatment strategies for SCCE are still not sufficiently standardized because of the extremely low incidence and few relevant studies. More well-designed prospective studies with larger sample sizes are urgently needed.

Disclosure

The authors have no conflicts of interest to declare.

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