Role of Presepsin for the Assessment of Acute Cholangitis Severity

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SUMMARY

Background: Presepsin is a new emerging inflammatory biomarker. The primary purpose of this study was to elucidate the predictive usability of presepsin for severity assessment in patients with acute cholangitis (AC).

Methods: A total of 119 treatment-naive patients with AC (64 males, 55 females) were enrolled in this study. Patients were classified with Grade I (mild), Grade II (moderate), or Grade III (severe) AC based on severity assessment guidelines. Presepsin concentrations were measured on admission.

Results: The median presepsin concentrations were 297 pg/mL (interquartile range (IQR) 234 - 386 pg/mL), 590 pg/mL (IQR 559 - 619 pg/mL), and 857 pg/mL (IQR 740 - 960 pg/mL) in patients with mild, moderate, and severe AC, respectively. Presepsin concentrations were significantly higher in patients with severe AC than in patients with moderate AC (p < 0.01), and in patients with moderate AC than in patients with mild AC (p < 0.01). With the receiver operating characteristic (ROC) analysis, the areas under the curves (AUCs) for presepsin to discriminate patients with moderate and severe AC were 0.935 (95% confidence interval (CI) 0.877 to 0.993, p < 0.001) and 0.942 (95% CI 0.885 to 0.998, p < 0.001), respectively.

Conclusions: Compared with other conventional biochemical indicators such as WBC, CRP, and PCT, presepsin may be a useful parameter for the severity assessment of AC.