D-dimer/fibrinogen ratio

Progressive hemorrhagic injury (PHI) greatly affects the prognosis of traumatic brain injury (TBI). D-dimer/fibrinogen ratio (D/F ratio) may be a potential predictor for venous thromboembolism. A study of Xu et al. sought to describe and evaluate any relationship between D/F ratio and PHI after TBI.

This retrospective study included a cohort of 192 TBI patients. Plasma D-dimer and fibrinogen were measured, and subsequently, D/F ratio was calculated. Multivariate logistic regression analysis was applied to identify predictors of PHI. The receiver operating characteristic (ROC) curve was configured to analyze predictive capability for PHI.

A total of 43 patients (22.4%) experienced PHI. Both Glasgow coma scale (GCS) score (odds ratio [OR], 0.565; 95% CI, 0.464-0.689) and D/F ratio (OR, 4.026; 95% CI, 2.219-7.305) were the two independent predictor for PHI. Area under ROC curve (AUC) of D/F ratio was similar to that of GCS score (AUC, 0.816; 95% CI, 0.754-0.868 vs. AUC, 0.834; 95% CI, 0.773-0.883; P=0.699). Moreover, D/F ratio significantly improved AUC of GCS score to 0.928 (95% CI, 0.881-0.960; P<0.001).

D/F ratio was strongly predictive of PHI in the studied cohort and, thereby should be considered in the clinical management of TBI patients [1].

A D-dimer level <0·35 µg/ml may exclude the diagnosis of pulmonary embolism. At a D-dimer cutoff 0·5 µg/ml and D-dimer/fibrinogen ratio cutoff 1·0, the D-dimer/fibrinogen ratio may have better specificity than D-dimer level in the diagnosis of pulmonary embolism, but the D-dimer/fibrinogen ratio may lack sufficient specificity in screening [2].

References

1)
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