

Comparison of Nutritional/Inflammatory Scores as a Preoperative Predictor of Short-Term Surgical Risks in Hepatectomy for Colorectal Metastasis

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ABSTRACT

Background: Various nutritional/inflammatory scores reportedly correlate with surgical outcomes of abdominal surgery, while it remains inconclusive which one is the best in prediction of short-term surgical outcomes of patients with colorectal liver metastasis (CLM).

Methods: Clinical records of 367 hepatectomies for 267 patients with CLM were retrospectively reviewed. Preoperative nutritional/inflammatory status was determined using 14 reported nutritional/inflammatory scores and predictive powers of these scores for short-term surgical outcomes were compared.

Results: In receiver operating characteristics curve analysis, controlling nutritional status (CONUT) score showed the highest performance in prediction of major postoperative morbidity (area under the curve [AUC], 0.650) among the tested scores and similar tendency was also confirmed in prediction of global postoperative morbidity (AUC, 0.622). Multivariate analysis confirmed that the CONUT score showed significant correlation with both global morbidity (odds ratio [OR], 1.29; 95% CI, 1.11-1.49, P=0.001) and major morbidity (OR, 1.31; 95% CI, 1.08-1.60; P=0.006). When preoperative degree of malnutrition was classified into normal, light, and moderate according to the original CONUT scoring system, short-term surgical outcomes were well stratified as follows: any morbidity, 21.8% vs. 35.1% vs. 51.9% (P=0.001); major morbidity, 6.2% vs. 11.7% vs. 29.6% (P=0.002); and postoperative hospital stay, 11 days vs. 11 days vs. 12 days (P=0.006).

Conclusions: The CONUT score could be a simple and reliable predictor of short-term surgical outcomes of patients undergoing hepatectomy for CLM.

Key words: CONUT score, colorectal liver metastasis, surgery, nutrition