

Kesahihan skor P-POSSUM dalam memprediksi lama perawatan intensif pasien pascabedah digestif mayor = The Validity of P-POSSUM score in predicting the length of stay in the intensive care unit in patients who underwent digestive surgery

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Abstrak

Latar Belakang: Secara global diperkirakan terdapat 313 juta pembedahan yang dilakukan, dengan angka kematian 30 hari pascaoperasi mencapai 4.2 juta jiwa. Penilaian kondisi pasien preoperatif diperlukan untuk memprediksi morbiditas dan mortalitas pasien pascabedah, maka modalitas yang digunakan dalam menilai risiko pembedahan sebaiknya memiliki akurasi dan objektivitas yang baik. Salah satu modalitas yang rutin digunakan di RSUPN Cipto Mangunkusumo (RSUPNCM) adalah skor ASA-PS. Namun skor ini sudah banyak ditinggalkan oleh negara maju dan beralih pada skor P-POSSUM yang dinilai lebih objektif, dan akurat. Studi ini menguji kesahihan skor P-POSSUM dalam memprediksi lama perawatan pasien pascabedah digestif mayor di ICU, yang mencerminkan keparahan morbiditas pascabedah. Tujuan: Studi ini menguji kemampuan kalibrasi dan diskriminasi skor P-POSSUM dalam memprediksi lama perawatan di ICU, dan menganalisis hubungan antar variabel skor P-POSSUM dengan lama perawatan di ICU pada pasien pasabedah digestif mayor. Metode: Studi ini merupakan studi kohort retrospektif di RSUPNCM selama Januari 2017 hingga Desember 2018. Sebanyak 289 subjek yang sesuai kriteria inklusi dianalisis dari data rekam medis. Lama perawatan pascabedah di ICU dan skor P-POSSUM subjek dicatat sesuai dengan data rekam medis. Variabel PPOSSUM yang berpengaruh terhadap lama perawatan subjek dianalisis dengan analisis bivariat dan regresi logistik multivariat. Kesahihan skor dinilai menggunakan uji kalibrasi Hosmer-Lemeshow dan uji diskriminasi dengan melihat nilai Area Under Curve. Hasil: Hasil analisis statistik menghasilkan bahwa skor P-POSSUM memiliki kemampuan kalibrasi yang baik (uji Hosmer-Lemeshow $p=0.815$) dan kemampuan diskriminasi yang cukup baik (AUC 77.8%, IK 95% 0.717-0.827). Variabel PPOSSUM yang secara statistik berpengaruh signifikan ($p<0.05$) terhadap lama perawatan di ICU adalah kadar natrium, jumlah perdarahan, laju jantung, dan EKG. Kesimpulan: Skor P-POSSUM sah dalam memprediksi lama perawatan pasien pascabedah digestif mayor di ruang intensif (ICU).

.....Background: It was estimated that there was 313 million surgery underwent worldwide, with the 30-days postoperative mortality rate reaching 4.2 million cases. The evaluation of preoperative patients' conditions is encouraged to predict postoperative morbidity and mortality, thus the modality used to assess surgery risk should be accurate and objective. RSUPN Cipto Mangunkusumo (RSUPNCM) routinely uses ASA-PS score to assess patients' condition. Nonetheless, ASA-PS has been regarded as subjective. Developed countries has started to replace this score with P-POSSUM score which was considered to be more accurate and objective. This study finds out the validity of P-POSSUM

Score in predicting the length of

hospital stay in the ICU in patients who underwent digestive surgery, which reflects the severity of postoperative morbidity. Goals: This study investigated the calibration and discrimination ability of POSSUM score in predicting the length of stay in the ICU, and also explored the relationship between variables in P-POSSUM score and the length of stay in the ICU in patients who underwent digestive surgery.

Methods: This retrospective cohort study was conducted in RSUPNCM in January 2017 to December 2018 on 289 subjects who met the inclusion criteria. P-POSSUM score and the length of stay in the ICU unit were recorded, the data was taken from

medical record. Bivariate and multivariate logistic regression was used to investigate the relationship between P-POSSUM variables and the length of stay. The validity of P-POSSUM score was assessed by Hosmer-Lemeshow calibration

test and the measurement of the Area Under Curve (AUC).

Results: Statistical analysis showed that P-POSSUM had a good calibration ability ($p=0.815$ for Hosmer-Lemeshow test) and moderate discrimination ability (AUC 77.8%, CI 95% 0.717-0.827). Four P-POSSUM variables were found to be significantly associated with length of stay in the ICU ($p<0.05$), namely sodium level, total blood loss, heart rate and ECG. Conclusion: P-POSSUM score is valid in predicting the length of stay in the ICU in patients who underwent digestive surgery.