

429 Preoperative Risk Assessment In Elective Colorectal Patients

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Introduction: Cardiopulmonary Exercise Testing (CPET) and the Colorectal Physiology and Operative Severity Score (CR-POSSUM) are increasingly used in colorectal surgical practice to risk-stratify patients preoperatively and for planning level 2 HDU or ITU admission. This study aims to generate a simple, objective pre-operative risk assessment model to complement clinical judgement, and to determine objectively for whom CPET is necessary in colorectal pre-assessment.

Method: A retrospective cohort study was conducted. Demographic and perioperative data were gathered, and CR-POSSUM score was determined retrospectively. Mortality at 12 months was considered the primary outcome with readmissions up to 12 months as secondary outcomes. Statistical analysis used Binary Logistic Regression, and odds ratios were reported with confidence intervals. A new combined pre-operative risk assessment model with the most significant individual predictors was constructed.

Results: Some 167 elective patients were included in the final analysis. Half of patients had planned HDU admissions. The all-cause mortality at 90 days was 3.5% and at 12 months was 11%. Readmission rate at 30 days was 10%, with a further 11.3% at 90 days postoperatively. The ASA, Physiology Score and Operative Severity Scores correlated with mortality rates ($p < 0.05$). Current diagnostic performance using CPET vs. the combined model identified 48% and 35% 'high risk' patients with 83.3% and 56.5% vs 94.4% and 76.1% sensitivity and specificity, respectively. The model draws its predictive power mainly from the CR-POSSUM.

Conclusions: Current practice at the study centre produces outcomes above the national average. The process can be improved whilst focusing resources further using the combined model.