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COLORECTAL SURGICAL MORTALITY AND MORBIDITY IN ELDERLY PATIENTS: COMPARISON OF POSSUM, P-POSSUM, CR-POSSUM AND CR-BHOM

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INTRODUCTION:

Morbimortality analysis is an imperative quality and excellence criteria in any Surgery Departement. This anlaysis should be periodic and objective.

OBJECTIVES:

To compare the predictive value of POSSUM, P-POSSUM, CR POSSUM and CR-BHOM for colorectal surgical mortality and morbidity in patients over 80 years old.

METHODS:

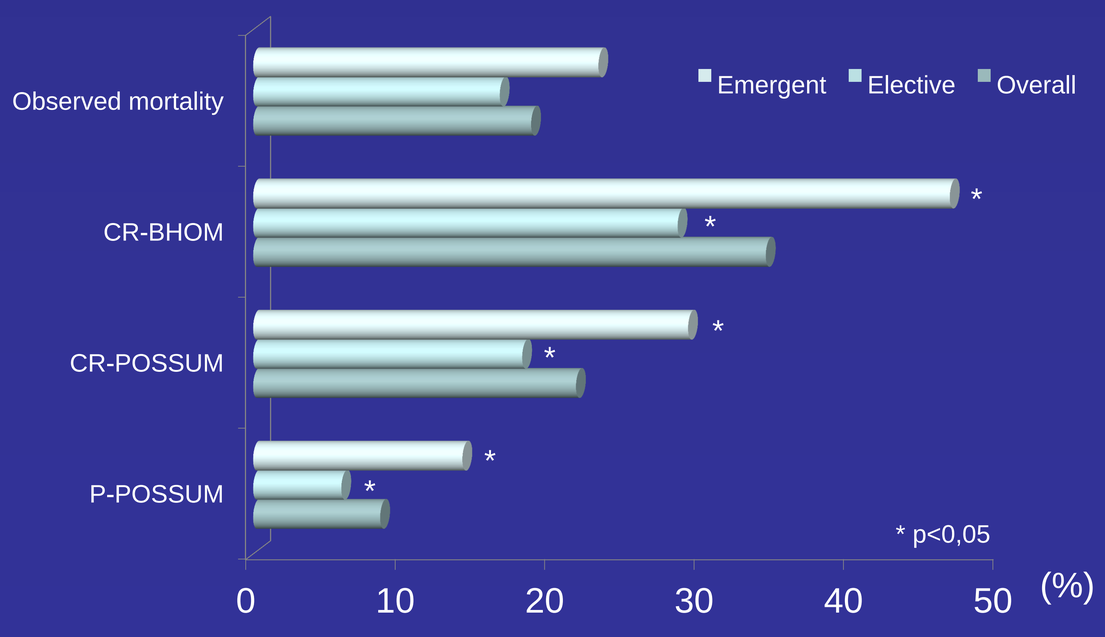
Observational, analytic, longitudinal, retrospective study. Patients over 80 years old who underwent colorectal surgery at our institution between 2008 and 2012 were included. POSSUM, P-POSSUM, CR-POSSUM and CR-BHOM, observed surgical mortality and morbidity were calculated and compared. Subgroup analysis was performed. Parametric tests were used. A p value < 0.05 was considered significant.

RESULTS:

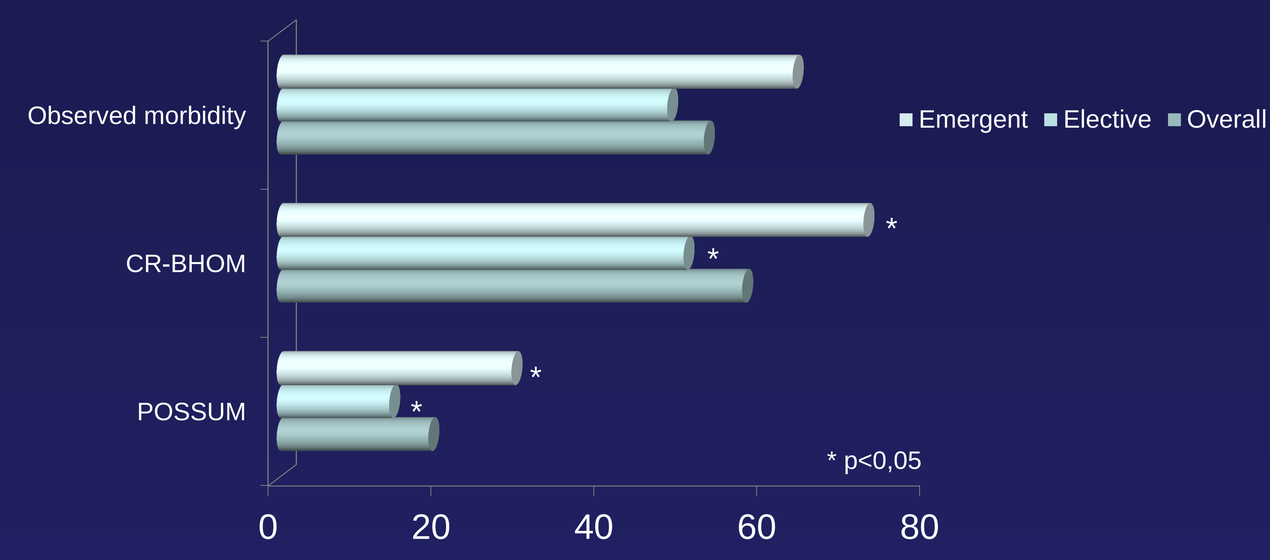
Table 1 - Patient characteristics overall and by elective or emergent surgery.

	Overall n=208	ELECTIVE n=141	EMERGENT n=67
Age in years, average±sd (range)	84.3±3.9 (80-100)	84.4±3.9 (80-100)	84.3±4.0 (80-99)
Female, n (%)	109 (52.4)	75 (53.2)	34 (50.7)
Malignant disease, n (%)	155 (74.5)	119 (84.4)	36 (53.7)
Serum urea, average±sd (mM)	53.0±40.4 (7.0-241.0)	45.2±35.1 (7.0-240.0)*	68.9±45.8 (11.0-241.0)*
Serum sodium, average±sd (mM)	138.5±7.7 (47.0-150.4)	138.0±8.8 (47.0-150.0)	139.5±4.8 (129.0-150.4)
Serum albumin, average±sd (mM)	2.7±5.7 (0.6-78.0)	2.5±0.8 (0.6-4.1)	3.2±9.9 (0.7-78.0)
Hospital stay in days, average±sd (range)	20.1±32.9 (0-355)	17.3±21.4 (0-130)	26.2±48.9 (0-355)

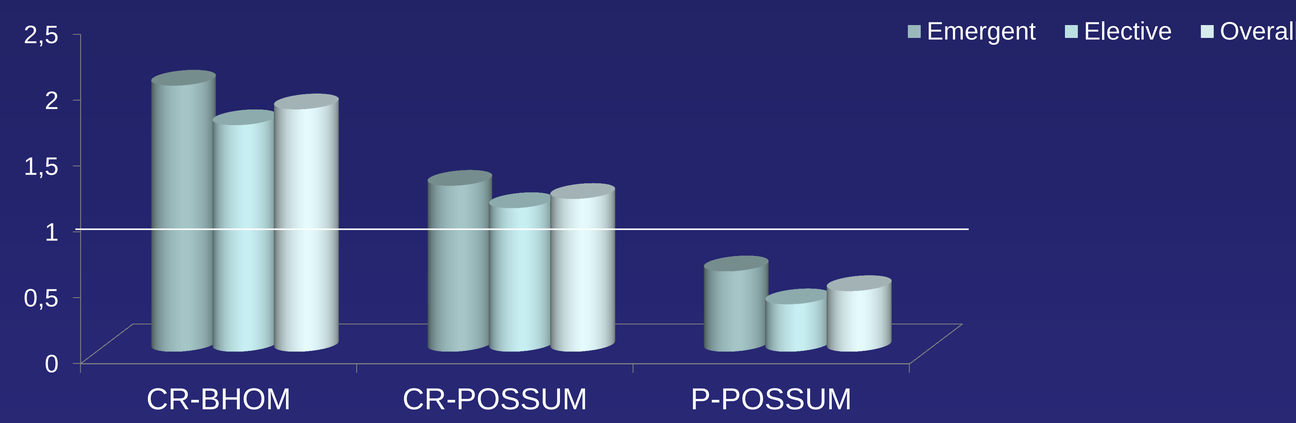
sd = standard deviation; *p<0.001, independent samples t-test

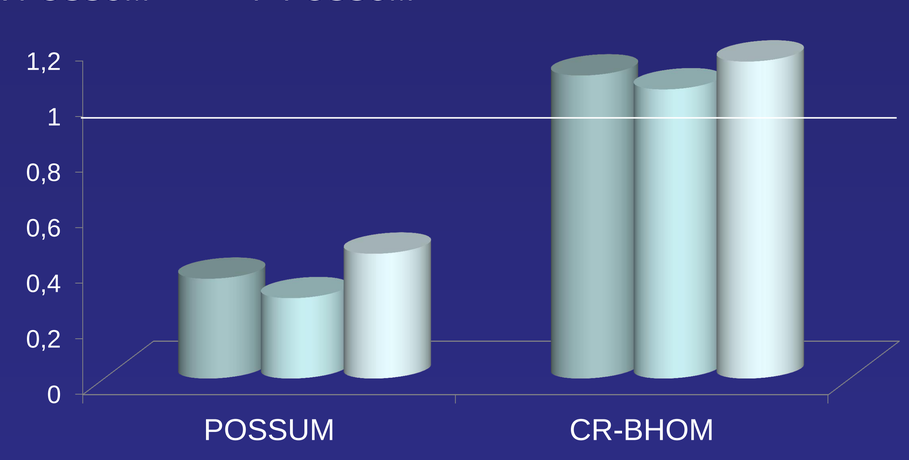


Graph 1 – Observed and expected surgical mortality.

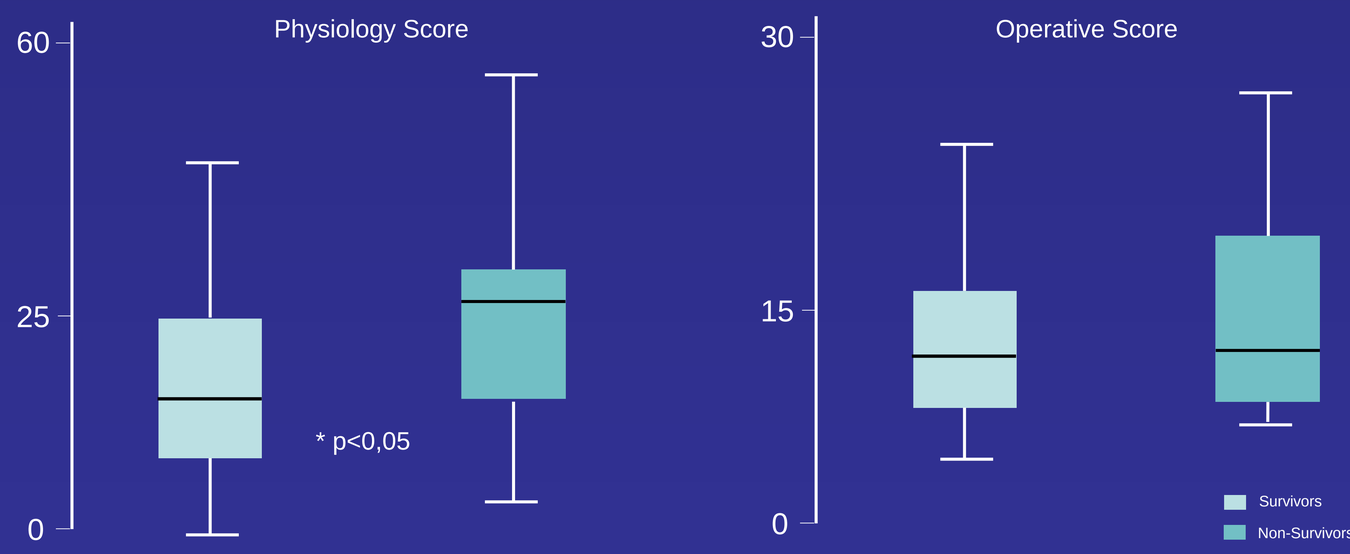


Graph 2 – Observed and expected morbidity.





Graph 3 and 4 – Expected/Observed (E/O) mortality and morbidity ratio.



Graph 5 and 6 – Operative Score and Physiology Score according to mortality and morbidity.

Conclusions:

- CR-POSSUM is the best predictor of surgical mortality.
- CR-BHOM is the best predictor of surgical morbidity.
- Psysiology Score was higher among patiens with morbimortality; Operative Score was not, suggesting that in elderly patients, it's the patient s status and not the type of surgery that is mainly responsible for the surgical outcome.