

Obstetric Population in the Intensive Care Unit : What do modern mortality prediction scores add?

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Introduction

Little is known about prediction of mortality in the obstetric subgroup of patients admitted to intensive care. Classic scores developed in the 80' like APACHE II e SAPS II clearly overestimate mortality.

Our goal was to evaluate the performance of three modern general risk scores [Acute Physiologic and Chronic Health Evaluation IV (APACHE IV), Simplified Acute Physiology Score 3(SAPS 3) and Mortality Probability Model III (MPM0-III)] in an obstetric population admitted to one mixed medical surgical obstetrical Brazilian ICU.

Calibration

SCORE	PREDICTED MORTALITY	SMR (95% CI)	HOSMER – LEMESHOW STATISTIC	P VALUE
MPM 0 - III	3,04%	0,37 (0,26 – 0,68)	44.8	0,03
SAPS 3	5,75%	0,26 (0,16 – 0,55)	62.9	<0,01
APACHE IV	1,86%	0,49 (0,24 – 0, 78)	8.2	0,28

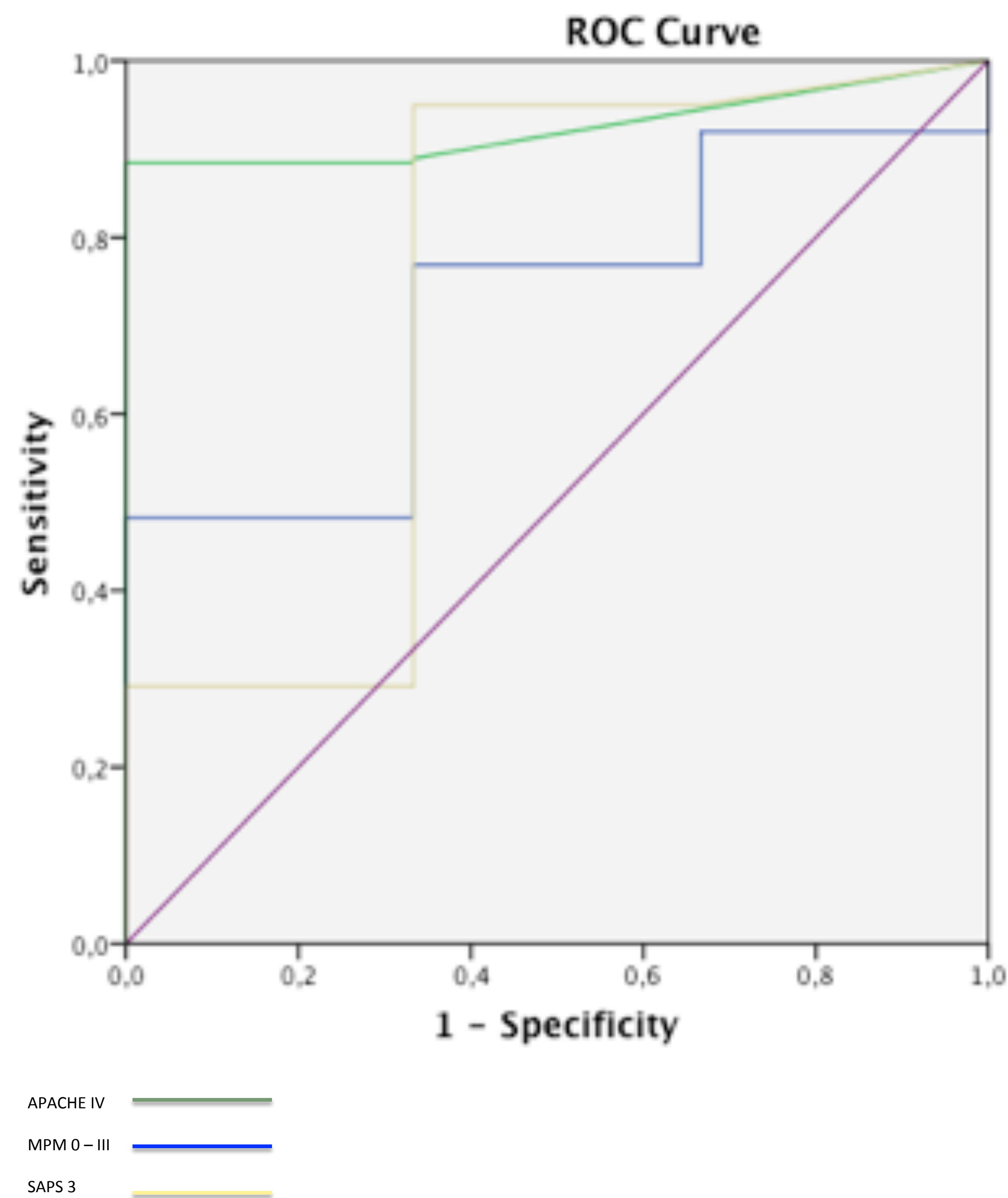
Methods

We did a retrospective analysis of a prospective collected database of 222 obstetric patients consecutively admitted to our ICU between April 2011 and March 2013.

Standardized mortality ratios (SMR) were calculated for all scores. Calibration was assessed by the Hosmer Lemeshow (HL) Goodness of fit test.

Discrimination was evaluated using area under the receiver operator curve (AUROC). Statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS)

Discrimination



Results

All scores overestimated hospital mortality, but Apache IV calibration was quite fair. SAPS 3 and MPM 0-III didn't perform well. Nonetheless discrimination was very good for all, specially for APACHE IV which had better discrimination than SAPS 3 and MPM 0III (p<0,001 for both comparisons).

Discussion

The obstetric population may deserve an specific score to predict their ICU mortality. If one score is to be used for This population among the ones at disposal, this should Be APACHE IV.