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Title: Role of procalcitonin (PCT) as a marker of severity of community acquired bacterial pneumonia (CABP) compared to PSI, CRB65 abd CURB65

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Body: Background: Community Acquired Pneumonia (CAP) can present as mild to often fatal illness (mortality 3.3% to 11%). One of the most important decisions for the treating physician is whether to hospitalize or not.This decision has great impact on patient outcome and cost of treatment.Hence accurate assessment of severity at presentation is vital to treatment strategy. PSI, CURB65 and CRB65 scores are available to assess severity, however not all physicians use these scores1. Aim: PCT, a marker of sepsis is easy to measure and hence we aim to assess the prediction value of PCT for severity of CABP. Methods: We enrolled patients≥15yrs meeting IDSA definition for CABP. Exclusion criteria was prior antibiotic use or immunosuppressive therapy. PSI,CURB65 and CRB65 scores were calculated at admission and baseline PCT levels were also measured semi-quantitatively. Patients were treated as per hospital protocol and were followed for 30 days for mortality.The sensitivity,specificity, negative and positive predictive value was calculated for PCT using each of the scores as gold standard. Results:

Demography

n	61
Age Mean (SD)	44.2 (16.5)
Males	44 (72.1%)
Females	17 (27.9%)
PSI Mean(SD)	84.4 (35.9)

Predictive Value of PCT for severity of CABP

Severity	Sensitivity	Specificity	PPV	NPV

PSI	66.67	83.78	72.73	79.48
CURB65	84.61	77.08	50	94.87
CRB65	100	64.41	8.69	100

Conclusions: PCT level at admission predicts patients at low risk for mortality. PCT when combined with CRB65 improves sensitivity and Negative Predictive Value for morality to 100. Reference: 1. Lindstrom et al. Respirology, July 2007.