Prospective cohort study of the qSOFA score versus the SIRS criteria in the determination and prognostication of sepsis in a Philippine tertiary hospital

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Sepsis is a leading cause of mortality both locally and worldwide. Despite this, early diagnosis of sepsis remains difficult, with a significant number not fulfilling SIRS criteria. In 2016, the Sepsis-3 guidelines modified its definition to include qSOFA score. To compare the two, 295 adult patients in the emergency room with suspected infection were included in the study and simultaneously determined their qSOFA score and SIRS criteria. The presence of sepsis was adjudicated by three infectious disease specialists, and outcomes within the first 48 hours were acquired. Sensitivity, specificity, positive predictive and negative predictive values for qSOFA and SIRS were computed using constructed confusion matrices, and overall predictive accuracy was measured by the AUROC. The qSOFA score was specific (95.5%) but poorly sensitive (46.3%) test compared to the SIRS criteria (sensitivity 73.7% and specificity 60%). Both qSOFA and the SIRS criteria significantly co-related with sepsis positivity but the qSOFA score had superior overall predictive accuracy at 70.9% compared to the SIRS criteria. The adjudicators had moderate strength in agreement (Fleiss' kappa=0.39) and a percentage agreement of 60%. Based on our findings, we conclude that the qSOFA score is a more accurate predictor of sepsis, but should not be used as a preliminary sepsis screening tool.

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