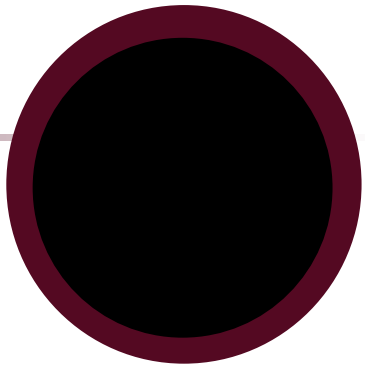

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An International validation of the "DECAF score" to predict disease severity and hospital mortality in acute exacerbation of COPD in the UAE.

Abstract:

The DECAF score (the Dyspnoea, Eosinopenia, Consolidation, Academia, and Atrial fibrillation score) has been adopted in some hospitals to predict the severity of Acute Exacerbation of Chronic Obstructive Pulmonary Disease (AECOPD). However, DECAF score has not been widely evaluated or used in Middle Eastern countries. The present study aimed to validate the DECAF score for predicting in-hospital mortality in patients with AECOPD in the United Arab Emirates (UAE). This was a retrospective, observational study conducted in 19 hospitals in the UAE. Data were retrieved from the electronic records of patients admitted for AECOPD in 17 hospitals across the country. Patients aged more than 35 years who were diagnosed with AECOPD were included in the study. The validation of the DECAF Score for inpatient death, 30-days death, and 90-day readmission was conducted using the Area Under the Receiver Operator curve (AUROC). The AUROCDECAF curves for inpatient death, 30-days death, and 90-day readmission were 0.8 (95% CI: 0.8-0.9), 0.8 (95% CI: 0.7-0.8), and 0.8 (95% CI: 0.8-0.8), respectively. The model was a satisfactory fit to the data (Hosmer–Lemeshow statistic=0.195, Nagelkerke R2=31.7%). There were significant differences in means of length of stay across patients with different DECAF score (p=0.008). Patients with a DECAF score of 6 had the highest mean length of stay, which was 29.8±31.4 days. Patients with a DECAF score of 0 had the lowest mean length of stay, which was 3.6±2.0 days. The DECAF score is a strong predictive tool for inpatient death, 30 days mortality and 90-day readmission in UAE hospital settings. The DECAF score is an effective tool for predicating mortality and other disease outcomes in patients with AECOPD in the UAE; hence, clinicians would be more empowered to make appropriate clinical decisions by using the DECAF score.