A332 - Wells score is not a reliable predictor of the risk of pulmonary embolism in critically ill patients: a retrospective cohort study

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Introduction:
Pulmonary embolism (PE) is a commonly missed deadly diagnosis [1]. At the emergency department, the pretest probability of PE can be assessed using clinical prediction tools. However, critically ill patients are at a high risk for PE and prediction rules have not been validated in this population. The aim of the present study was to assess the Wells scoring system as a predictor of PE in critically ill patients.

Methods:
Computed tomographic (CT) pulmonary angiographies performed for suspected PE in adult critically ill patients during their intensive care unit stay were identified by the radiology information system. Wells score was retrospectively calculated based on medical records and its reliability as a predictor of PE was determined using a receiver operator characteristic (ROC) curve.

Results:
From the 144 patients evaluated, 39 (27%) were positive for PE based on CT pulmonary angiography. Mean Wells score was 3.9 ± 2.7 in patients with PE versus 2.4 ± 1.5 in patients without PE (P <0.001). Sixty patients (41.6%) were considered as low probability for PE (Wells score <2). From them, 13 patients (22%) presented with filling defects on CT scan, including two patients with main stain pulmonary artery embolism and one patient with lobar artery embolism. The area under ROC curve was 0.656. When a Wells score >4 was used to predict risk of PE, the sensitivity was 43%, specificity was 88%, PPV was 59% and NPV was 88.6%.

Conclusion:
In this population of critically ill patients, Wells score was not a reliable predictor of risk of PE.

References: