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Comparison of the Wells score and the revised Geneva score as a tool to predict pulmonary embolism in outpatients over age 65

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Abstract

Title: Comparison of the Wells score and the revised Geneva score as a tool to predict pulmonary embolism in outpatients over 65 years of age. **Introduction:** The incidence and mortality of pulmonary embolism (PE) is high in the elderly. The Wells score (SW) and the revised Geneva score (RGS) have been validated in patient populations with a large age range. The aim of this study was to compare the predictive accuracy of these two scores in diagnosis of PE in patients over 65 years of age. **Method:** A prospective multicentre study (nine French and three Belgian centres) was conducted at the same time as the PERCEPIC study. A total of 1757 patients admitted with suspected PE were included and divided into two groups according to age (≥ 65 years or < 65 years). The pre-test probability of PE was assessed prospectively for the RGS. The SW was calculated retrospectively. The predictive accuracy of the two scores was compared by the area under the curve (AUC) of the ROC curves. **Results:** The overall prevalence of PE was 11.3%. The prevalence among patients aged ≥ 65 in the low, moderate and high pre-test probability groups, evaluated using the WS and was respectively 13.5% (CI 95%: CI 9.9–17.3), 28.2% (CI 22.1–34.3), 50% (CI 26–74) and 8.1% (CI 3.2–12.9), 22.3% (CI 18.2–26.3), 43.7% (CI 25.6–61.9) using the RGS. The AUC for the WS and RGS for patients aged ≥ 65 was 0.632 (CI 0.574–0.691) and 0.610 (CI 0.555–0.666). The difference between the AUCs was not statistically significant ($p = .441$). **Conclusion:** In the population for this study, the WS and RGS have the same PE diagnostic accuracy in patients over age 65. This result should be validated in a prospective study that directly compares these scores. © 2020 Elsevier Ltd

Author Keywords

Clinical probability scores; Elderly; Outpatients; Pulmonary embolism; Revised Geneva score; Wells score

Index Keywords

D dimer; adult, age distribution, aged, area under the curve, Article, controlled study, deep vein thrombosis, diagnostic accuracy, diagnostic test accuracy study, dyspnea, female, health care facility, hemoptysis, human, incidence, lung embolism, major clinical study, male, middle aged, mortality, outpatient, prediction, predictive value, prevalence, priority journal, probability, prospective study, receiver operating characteristic, retrospective study, revised Geneva score, scoring system, Wells score, clinical trial, lung embolism, multicenter study; Aged, Area Under Curve, Humans, Outpatients, Predictive Value of Tests, Prospective Studies, Pulmonary Embolism, Retrospective Studies

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