

Performance of the Pulmonary Embolism Rule-out Criteria (the PERC rule) combined with low clinical probability in high prevalence population

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R sum  en anglais

Introduction PERC rule was created to rule out pulmonary embolism (PE) without further exams, with residual PE risk < 2%. Its safety is currently not confirmed in high PE prevalence populations even when combined with low clinical probability assessed by revised Geneva score (RGS). As PERC rule and RGS are 2 similar explicit rules with many redundant criteria, we hypothesized that the combination of PERC rule with gestalt clinical probability could resolve this limitation. Methods We collected prospectively documented clinical gestalt assessments and retrospectively calculated PERC rules and RGS from a prospective study of PE suspected patients. We analyzed performance of combinations of negative PERC with low clinical probability assessed by both methods in high overall PE prevalence population. Results Among the final study population (n = 959), the overall PE prevalence was 29.8%. Seventy-four patients (7.7%) were classified as PERC negative and among them, 4 patients (5.4%) had final diagnosis of PE. When negative PERC was combined with low pretest probability assessed by RGS or gestalt assessment, PE prevalence was respectively 6.2% and 0%. This last combination reaches threshold target of 2% and unnecessary exams could easily have been avoided in this subgroup (6%). However, its confidence interval was still wide (0%; CI 0-5). Conclusions PERC rule combined with low gestalt probability seems to identify a group of patients for whom PE could easily be ruled out without additional test. A larger study is needed to confirm this result and to ensure safety.

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