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Clinical Decision Rules and Patients With Acute Pulmonary Embolism[☆]



Reglas de decisión clínica en los pacientes con tromboembolismo pulmonar agudo

To the Editor:

Emergency department physicians are making increasing use of clinical decision rules (CDR) in commonly encountered conditions as a guide for diagnostic tests, therapeutic interventions, or the final destination of the patient. Several well-known CDRs are used in the diagnostic work-up of pulmonary thromboembolism (PTE), including the Wells rule, the revised Geneva score, the simplified Wells rule and the simplified Geneva score. These scales, used in combination with normal D-dimer test results, are similarly useful for excluding PTE.¹ Another option is the Pulmonary Embolism Rule-out Criteria (PERC), which is highly sensitive for ruling out PTE in patients with low pre-test probability, without the need for determining D-dimers.²

Some low-risk patients with acute PTE can be safely and effectively treated in the outpatient setting.³ CDR that can help emergency department physicians identify this patient subgroup is needed for making admission decisions, with a view to offering an alternative to conventional hospitalization. This would prevent unnecessary admissions and improve the efficiency of the process. An alternative to conventional hospitalization may be home-based hospital care, already shown to be a safe, efficient, cost-effective approach in other pathologies seen in the emergency room.⁴ Ferrer et al. recently validated 2 prognostic clinical scores in a population of Spanish patients with symptomatic acute PTE, shedding more light on the use of CDR in admission decisions. They concluded that the simplified Pulmonary Embolism Severity Index (PESI) is safer than the Spanish score for identifying PTE patients with low risk of short-term complications.⁵ If these results are confirmed, patients with a simplified PESI score of 0 would be potential candidates for direct discharge from the emergency department with possible follow-up via a hospital-at-home program.

Finally, it is important to note that in the emergency setting there is still significant uncertainty regarding the stratification of

patients with PTE who are not unstable, yet could benefit from fibrinolytic treatment, invasive procedures and/or admission to the intensive care unit. The results from ongoing clinical trials evaluating fibrinolysis in patients with stable PET, raised cardiac troponin levels and echocardiographic right cavity dysfunction have not yet been published. The lack of consensus on the acute management of intermediate-risk PTE patients, therefore, makes the need for correct classification of stable PTE patients and further clarification of the “real” behavior of these patients in daily clinical practice even more pressing. This, in the near future, will help clinicians apply the results of ongoing trials and design further research strategies.

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