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Abstract:

Objectives The administration of empiric systemic anticoagulation (ESA) before confirmatory radiographic testing in patients with suspected pulmonary embolism (PE) may improve outcomes, but no data have been published regarding current practice. We describe the use of ESA in a large prospective cohort of emergency department (ED) patients and report the outcomes of those treated with ESA compared with patients not receiving ESA. Methods 12-center, noninterventional study of ED patients who presented with symptoms concerning for PE. Clinical data including pretest probability and decision to start ESA were recorded at point of care by attending physicians. Patients were followed for adverse in-hospital outcomes and recurrence of venous thromboembolism. Results ESA was initiated 342/7932 (4.3%) of enrolled patients, including 142/618 (23%) patients with high pretest probability. Patients receiving ESA had more abnormal vital signs and were more likely to have a history of venous thromboembolism than those who did not receive ESA. Overall, 481/7,932 (6.1%) had PE diagnosed, 72/481 (15.0%) with PE had ESA, and 72/342 (21%) of ESA patients had PE. Three patients (0.9%, 95%CI: 0.2-2.5%) who received ESA suffered hemorrhagic complications compared with 38 patients (0.5%, 95%CI: 0.4-0.7%) who did not receive ESA. Conclusions In this multicenter sample, ED physicians administered ESA to a small, generally more acutely ill subset of patients with high pretest probability of PE, and very few had hemorrhagic complications. ESA was not associated with any clear difference in outcomes. More study is needed to clarify the risk versus benefit of ESA.