Pulmonary Embolism Prevalence in Admitted Syncope Patients: 1 in 6 Really?

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Guest Contributors
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Editor's Note: *You are reading the 56th installment of* Annals of Emergency Medicine *Journal Club. This Journal Club refers to the article by Prandoni et al*[1] *published in the October 20, 2016, edition of the* New England Journal of Medicine*. This bimonthly feature seeks to improve the critical appraisal skills of emergency physicians and other interested readers through a guided critique of actual* Annals of Emergency Medicine *articles. Each Journal Club will pose questions that encourage readers—be they clinicians, academics, residents, or medical students—to critically appraise the literature. During a 2- to 3-year cycle, we plan to ask questions that cover the main topics in research methodology and critical appraisal of the literature. To do this, we will select articles that use a variety of study designs and analytic techniques. These may or may not be the most clinically important articles in a specific issue, but they are articles that serve the mission of covering the clinical epidemiology curriculum. Journal Club entries are published in 2 phases. In the first phase, a list of questions about the article is published in the issue in which the article appears. Questions are rated "novice" (NOV), "intermediate" (INT), and "advanced" (ADV) so that individuals planning a journal club can assign the right question to the right student. The answers to this journal club will be published in the August 2017 issue. US residency directors will have immediate access to the answers through the Council of Emergency Medicine Residency Directors Share Point Web site. International residency directors can gain access to the questions by e-mailing journalclub@acep.org. Thus, if a program conducts its journal club within 5 months of the publication of the questions, no one will have access to the published answers except the residency director. The purpose of delaying the publication of the answers is to promote discussion and critical review of the literature by residents and medical students and discourage regurgitation of the published answers. It is our hope that the Journal Club will broaden* Annals of Emergency Medicine*'s appeal to residents and medical students. We are interested in receiving feedback about this feature. Please e-mail* journalclub@acep.org *with your comments.*

DISCUSSION POINTS

1. Prandoni et al[1] performed a systematic evaluation for pulmonary embolism (PE) among admitted patients with syncope at 11 Italian hospitals.
   - NOV A. What was the study's primary result? Does the study result reflect your clinical experience?
   - NOV B. Describe the admission criteria for syncope in these hospitals. Are these admission practices similar to those in your practice setting?
   - INT C. Discuss the apparent morbidity level of the patients included in the study cohort. How does the baseline disease burden of the patients in this study compare with the disease burden of syncope patients in your emergency department (ED)?
   - INT D. How might this study's results differ from those of a study conducted in hospitals like yours?
2. NOV A. The authors used the Evaluation of Guidelines in Syncope Study Score to determine the probability of cardiac syncope. What are the elements of this score?
   - NOV B. What objective tests did all patients who presented with syncope undergo? Is this different from the evaluation you typically order for a patient with syncope?
3. NOV A. What risk-stratification scores exist for PE? Which scores were used in Prandoni et al?[1] Which ones do you use clinically?
   - INT B. What percentage of patients in this study followed the suggested diagnostic algorithm? Did the diagnostic algorithm follow accepted guidelines for PE evaluation?
   - INT C. Were the PEs diagnosed in this study clinically relevant? Do you think the PEs diagnosed in the study explain the presentation of syncope?
4. The study concludes that 17.3% of patients hospitalized for syncope have a PE.
   - INT A. Of all patients who visited the ED for syncope, what percentage of them received a definitive diagnosis of PE?
   - NOV B. How did the study authors account for patients who died or were lost to follow-up?
   - NOV C. What was the mean age of patients in the study population? How does this change the way you interpret these data?
   - INT D. How does this study affect your decision to aggressively evaluate syncope patients for PE in the

ED who do not otherwise appear to have a PE? What would be the downstream effects if more of these patients were to undergo evaluation for PE?

5. One's interpretation of this study is highly dependent on understanding exactly who was included in the study.

INT A. What exactly do you know about these patients (and the patients who were excluded)? What do you not know that you would like to know?

ADV B. This study design falls under the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guideline.[2] What does STROBE say about how the study cohort should be described? Did the authors meet the STROBE requirement? If not, how so? If yes, is STROBE adequate to ensure reporting that is sufficient to allow us to determine the external validity of the study?

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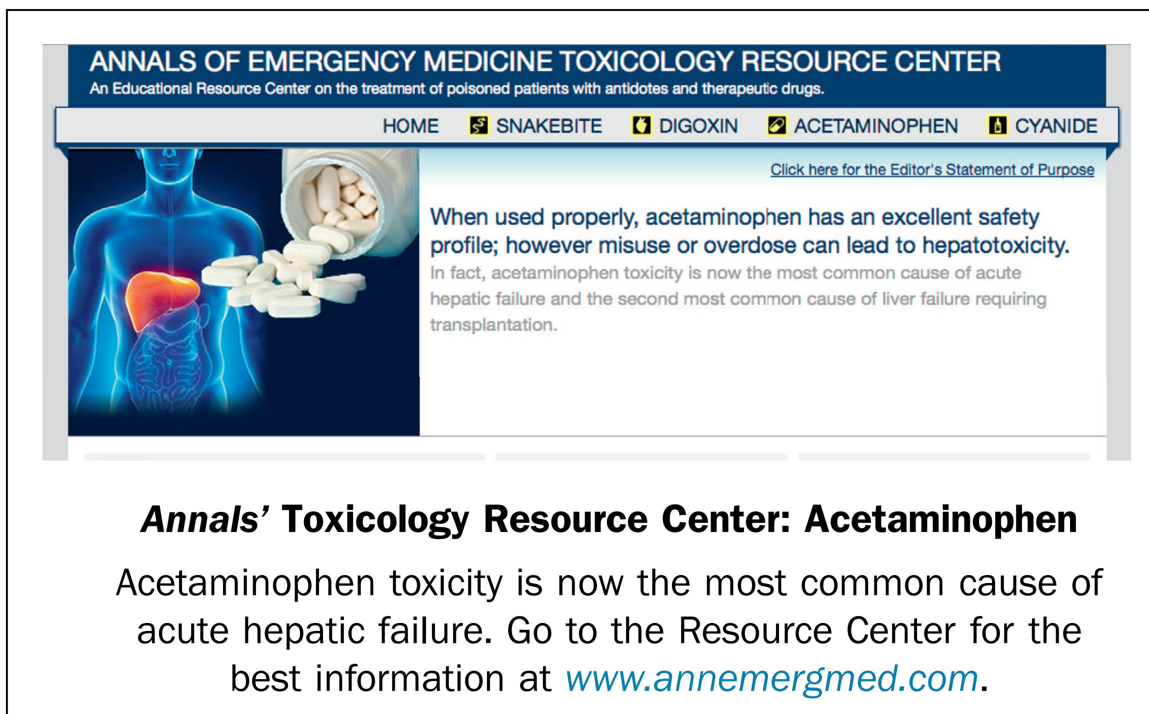

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