

at one extreme, if one chooses to obtain the D-dimer, acknowledging a very low likelihood of disease (1%) and given the worst test characteristics identified in the literature, the posttest probability of disease only moves to 1.3%, with a cost of falsely labeling 98.7% of the patients as needing further testing to exclude a pulmonary embolus. Given the best test characteristics identified in the literature, one only moves up to a 2.1% likelihood of disease, still with an unfortunate false-positive rate as high as 97.9%.

As the pretest probability of disease increases, the percentage of all positive test results being true positive increases. So, if one estimates the pretest probability of the patient having a pulmonary embolus increasing to 10% (probably more typical of an ED scenario), the range of posttest probabilities of disease moves to 12.9% to 19.3%. Although in the best of circumstances, the incremental improvement in decisionmaking is enhanced by 9.3%, one still misclassifies 81.7% of the patients who test positive.

Clearly, given the need to minimize the risk of missing a disease with a grave outcome, one must accept a certain manageable number of falsely positive test results. I wrestle with how many patients identified as falsely positive are appropriate in a busy ED. Until a more useful screening test with better characteristics is available, I plan on limiting my use of D-dimer testing to patients who exceed a low pretest probability of disease (who require no testing) and are below a moderate pretest probability of disease for whom I would go directly to the definitive test.

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Deadly Game Among Children and Adolescents

To the Editor:

In the February 2003 issue of *Annals*, Shlamovitz et al¹ (article #49) are to be lauded on their description of a dangerous game of self-inflicted suffocation among adolescents. A case report on a syncopal event in a teenager revealed a hazardous game called "suffocation roulette," a finding that demonstrates the potential gravity of the problem. Still, it should be made clear that such tragic stories are not unheard of in the emergency medicine literature and are more common than hitherto appreciated. Notably, mortality resulting from the "game" has been reported, further attesting to the importance for parents and emergency physicians to recognize it.

Awareness of the game of producing a temporary state of asphyxia (for other than erotic purpose) dates back to the observation of Eskimo children by anthropologists decades ago.² Clearly, such "games" are not as innocent as the name might imply. A case of reckless assault had even

been filed against a teenager in the act of playing in a game of "pass out" on a school playground.³ A recent nationwide survey of coroner's reports identified 4 deaths and 1 near-death resulting from self-strangulation. Two of these cases were attributed to a "choking/blackout game" being played at school by previously healthy boys.⁴ It was alleged that the game provided a dizzy sensation (resulting from the impending loss of consciousness), which was described as "cool." The pleasure derived from such thrill-seeking behavior has been putatively linked with an altered consciousness level from constricting cerebral venous and arterial blood flow, accompanied by elevated carbon dioxide tension.

With the evolving acknowledgment of this potentially fatal game, we must question how many cases of "accidental or suicidal death" might have been ascribed to the "choking game." The need for increased awareness is clear. Physicians, particularly those in emergency departments, should learn more about such apparently "childish" games, just as they would for other teenager risk behaviors (such as substance abuse).

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