Which Primary Diagnostic Tool Should Be Used for Blunt Abdominal Trauma?

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Early in the eighties, we used abdominal sonography as the sole primary screening test for blunt abdominal trauma because of the unavailability of CT in our hospital (i.e., the pre-CT period). Sonography was then performed by in-house pediatric radiologist, and the results were reviewed by the study by Bode et al. [1]. When CT became available, the primary sonogram test selection shifted progressively toward CT (i.e., the post-CT period) because CT provides information that is less radiologist-dependent and that can be interpreted by a trained surgeon regularly involved in an emergency department. Furthermore, follow-up CT examinations provide sequential data that are easier to compare. The initial injury severity scores [2] were statistically identical for the pre-CT period (n = 250; range, 6-75; mean, 21; median, 14) and the CT period (n = 285; range, 8-72; mean, 22; median, 16). Nevertheless, the overall number of patients correctly identified as requiring emergency laparotomy remained the same during both periods. No patient was mistakenly discharged during either period.

We agree with Bode et al.'s statement [1] that sonography in the primary diagnostic tool provides fast and noninvasive initial assessment of trauma patients with the limitation, however, that it should be performed by a fully trained sonographer—who is a rarely available around the clock in an emergency department. We are less convinced that sonography is cost effective, considering that cost containment is sometimes just cost displacement. Indeed, when the initial sonographic examination is not conclusive, it is often difficult to compare its initial dynamic information with that from follow-up sonography because the examiner may have changed. Therefore, it is not surprising that Bode et al. report 12 false-negative results (follow-up study; CT, n = 6; sonography, n = 4). Since a false-negative rate is unacceptable considering the types of lesions overlooked (11; perforation, 2; false negative). This precisely represent the lesions that must not be overlooked.

Initial examination of our unit abdominal trauma patients has benefited from the introduction of helical CT. However, even though CT is a useful method for identifying and quantifying abdominal and retroperitoneal injuries or for documenting the progression of