FAST Ultrasound
More Information: General FAST Ultrasound Information

The evaluation of the trauma patient with suspected thoracoabdominal trauma is often a diagnostic challenge for the emergency physician and trauma surgeon. Physical examination cannot always be relied on as a sensitive modality for detecting significant internal injuries. This lack of reliability has led physicians to depend on ancillary tests to detect potentially life-threatening internal injuries in these patients.

The use of ultrasound (US) in the evaluation of the trauma patient was first reported by Kristensen et al in 1971 for the diagnosis of splenic hematomas.[1] In 1976, Asher et al described the use of US in the evaluation of patients with splenic injuries.[2] This article was followed by numerous studies in the European literature over the next two decades.[2-10] In 1988, the German Association of Surgery included mastery of US in its guidelines for surgical resident education.[11] Today, US has virtually replaced diagnostic peritoneal lavage (DPL) as a primary imaging modality for trauma patients in Europe and Japan.

The first American report on the use of US in the evaluation of blunt abdominal trauma (BAT) was published in 1992 by Tso et al.[12] Since that first study in 1992, numerous studies have been published in this country by emergency physicians and trauma surgeons favoring the use of US in the evaluation of patients with BAT.[13-23] In 1997, the American College of Surgeons included the use of US in the American Trauma Life Support (ATLS) secondary survey.[24] That same year, an international panel of experts met to discuss key issues related to the FAST exam (Focused Assessment with Sonography for Trauma) in order to allow broader recognition of the test and its applications.[25]

The acronym, FAST, was given by Rozycki in 1996 and originally stood for "Focused Abdominal Sonography for Trauma". However, as the trauma exam has evolved over the years, this name has also changed to reflect the addition of a sonographic window outside of the abdomen. In 1997, the FAST Consensus Conference Committee concluded that the acronym should stand for "Focused Assessment with Sonography for Trauma."[25]

The focused bedside trauma examination has evolved from a single right upper quadrant (RUQ) window to the current standardized FAST exam.[25, 26] The FAST exam is not meant to be a formal, multi-organ study that will identify all sonographically detectable pathology. Its success and growing widespread popularity is largely due to the fact that the exam is accurate, noninvasive, focused and can easily be performed with minimal training. The current standardized FAST exam consists of four sonographic windows: 1. Pericardial, 2. Perihepatic, 3. Pelvic, and 4. Perisplenic (see Figure 1 next page).

Figure 1. The sonographic windows of the FAST exam: 1. Pericardial, 2. Perihepatic, 3. Pelvic, and 4. Perisplenic.

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