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174 The Feasibility of Consent for Computed Tomography in Acute Trauma Patients

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Study Objectives: Although the prevalence of injury has remained constant, computed tomography (CT) use in trauma evaluation has increased dramatically in the past two decades, increasing costs and exposing patients to potentially cancer-causing radiation. Despite these potential harms, expense, and other research demonstrating that trauma patients wish to be informed of the risks and costs of CT, consent for trauma CT is not routinely obtained in adults. The reasons for not obtaining consent may include concerns about lack of time and patients having altered mental status that would preclude adequate consent. In this prospective study we sought to determine whether obtaining consent for CT is feasible from these standpoints in adult trauma patients.

Methods: We conducted this two-phase, prospective study at two urban Level 1 trauma centers. In the first phase we determined the median time needed to obtain consent for CT by performing sham consent on 11 trauma patients at each site. In the second phase we observed adult trauma activation cases, recording patients' Glasgow Coma Scores (GCS) and time available for consent for CT (TACCT)—defined as the time (rounded to the nearest minute) between the end of the physician's secondary survey and when the patient left the trauma resuscitation room to go to CT. Trauma providers were unaware of the study and these observations. We defined, a priori, feasible consent cases as those in which the patient had a GCS of 15 and a TACCT > than the median time for consent at that site.

Results: The median times for sham CT consent in phase 1 were 2 and 4 minutes. Of the 729 patients enrolled in phase 2, 647 (89%) underwent CT evaluation. Their median age was 52 years (IQR 32, 74); 54% were male; 95% had a blunt mechanism of trauma; 55% were admitted to the hospital; and 5% had a surgical procedure performed after CT. The median and mean TACCT were 11 min (IQR 7, 19) and 17 min (SD 20) respectively. The median GCS was 15 (IQR 14, 15). Of the 647 patients enrolled, 439 patients (67.9%; 95% confidence interval [CI] 64.2 – 71.3%) met feasible consent criteria. Of the 208 patients who did not meet feasible consent criteria, 190 (91.4%; 95% CI 86.7 – 94.5%) had a GCS less than 15 and 18 (8.7%; 95% CI 5.5 – 13.3%) had a short TACCT.

Conclusions: In this study of acute, adult trauma patients, consent for CT was feasible in over two-thirds of patients. When CT was not feasible, the primary reason was a GCS < 15. When considering efforts to increase shared decisionmaking between medical providers and acute trauma patients, informed consent for CT scans is a feasible option. Future studies may determine if providing such informed consent correlates with improvement in patient satisfaction and more efficient CT utilization.

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