

Analysis of Urobilinogen and Urine Bilirubin for Intra-Abdominal Injury in Blunt Trauma Patients

Gorchynski J, Dean K, Anderson CL. Analysis of Urobilinogen and Urine Bilirubin for Intra-Abdominal Injury in Blunt Trauma Patients. *WestJEM*. 2009; 10:85-88.

To the Editor:

We wish to comment on the article by Gorchynski et al,¹ “Analysis of Urobilinogen and Urine Bilirubin for Intra-Abdominal Injury in Blunt Trauma Patients,” which concludes that initial urinalysis in the emergency department (ED) for adult blunt abdominal trauma patients should not be used as a screening tool for the evaluation of intra-abdominal injury.

In our ED trauma center with annual census of 33,837 patients, 50% of our cases are related to adult blunt trauma. We consider urinalysis an essential part of the work-up of patients with blunt trauma to the abdominopelvic cavity to detect possible renal or bladder injury. However, further work-ups are requested only in microscopic hematuria cases in pediatric patients or in patients who were hemodynamically unstable, who had pelvic fracture, flank trauma or gross hematuria.

We base our protocol on the fact that if urinalysis is checked in all patients with blunt trauma, microscopic hematuria may be present in many cases; however, microscopic hematuria by itself is not a predictor of genitourinary tract injuries.

The aim of this letter is to emphasize that in hemodynamically stable, conscious adult patients with blunt trauma to the abdominopelvic cavity, checking urinalysis is not an essential routine work-up in management. This strategy has two advantages: first, since our management is not based on urinalysis, we can manage patients more rapidly, and second, in busy trauma centers, especially in developing countries where accidents are the first etiology of surgical ED admissions, it can decrease costs superimposed on the healthcare system.

Shahram Paydar, MD

Roohollah Salahi, MD

Shahram Bolandparvaz, MD

Hamid Reza Abbasi, MD

Shiraz University of Medical Sciences, Trauma Research Center, Shiraz, Iran

In reply:

Thank you for your letter in response to the article “Analysis of Urobilinogen and Urine Bilirubin for Intra-Abdominal Injury in Blunt Trauma Patients” in which you state that your institution does not routinely use the urinalysis for assessment of intra-abdominal injury in adult blunt trauma patients. You may find that selective ordering and assessment of the urinalysis in the adult blunt trauma patient with a pelvic fracture or flank trauma at your institution may also prove not to be a useful adjunct tool for the determination of intra-abdominal organ injury. This would be due to the large number of related organ injuries associated with pelvic fractures and the routine computed tomography (CT) imaging in patients with flank trauma.

I support your statement that routine urinalysis is not an essential work-up in the hemodynamically stable and conscious adult blunt trauma patient for intra-abdominal injury. However, for adult blunt trauma patients who are hemodynamically stable but unconscious (or low GCS score), a urinalysis for the evaluation for an acute intra-abdominal injury may also not be necessary since those patients routinely undergo CT imaging for occult intra-abdominal-thoraco-cranial injury.

Agreed, that in busy trauma centers, especially in developing countries, the utility of routine urinalysis in the emergency department is not a useful adjunct tool for the assessment of intra-abdominal injuries in adult blunt trauma patients nor is it cost effective.

Julie Gorchynski, MD, MSc

Department of Emergency Medicine, JPS Health Network, Fort Worth, TX