Rectal examination is rarely helpful in the trauma patient and can be deferred unless certain criteria are met.

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PICO question:

P-In ED trauma patients
I-Is deferring the digital rectal exam
C-Compared to performing the exam
O-Associated with missed diagnosis and poorer outcomes

Clinical scenario:
A 24 year old male presents c/o abdominal pain after crashing his motorcycle into a sedan at approximately 15 mph. He is awake and alert without neuro deficits. Does this patient need a rectal examination.

Search strategy:
Searched Medline (OVID) and Pubmed 2000-present for rectal exam (or examination) AND trauma limiting to English

Search outcome:

Author, date	Patient group	Study type	Key results	Weaknesses
Guldner, Brzenski. 2006	Patients over 15 years with blunt trauma with high enough severity to activate the trauma team	Retrospective review. N=1168	The DRE is highly specific (91-94%) for SCI but lacks sensitivity	Retrospective; Not blinded; blunt trauma only; some pt's may have had their DRE done after radiography or MRI; 5% rate of SCI *sick population
Esposito et al., 2005	All trauma pt's (ages ranged from 2 mos. To 102 years.	Prospective study	DRE is equivalent to objective clinical findings for confirming or excluding the presence of index injuries** and thus can be avoided in	N=512; only 30 index injuries; rectal exam was generally done by the least experienced clinician (i.e. medical student or intern)

			virtually all trauma patients	
Guldner, Babbitt, et. al	Adult (>15 years of age)trauma pt’s; n=512	Retrospective study	DRE can safely be deferred if: normal neuro exam, no blood at the urethral meatus and age less than 65 years (sensitivity 99.2-100%)	Retrospective study; only 34 true positives; pt’s met certain trauma activation criteria that predict higher acuity
Porter, Ursic, 2001	All trauma pt’s at a level II trauma center; n=423	Prospective observational study	Hemoccult test does not add any useful information in trauma patients, No rectal necessary if all of the following are met.***	Level II trauma center; 81%blunt trauma

*Criteria for trauma team activation: One or more of the following: **GCS<12**, RR <10 or >30, SBP<90, revised adult trauma score <9, **Traumatic full arrest**, flail chest, suspected pelvic fx, neck or back injury w/ neuron deficits, **major vascular injury w/ uncontrolled external bleeding or ischemia**, **chest wall trauma w/ resp. compromise**, obstruction or intubation, **2 or more proximal long bone fx’s**, **amputation proximal to the wrist or ankle**, transfer pt’s from other hospital receiving blood to maintain vital signs, electrical burns, **falls>20 ft or 2 stories**, pedestrian struck by vehicle, co-occupant of vehicle dead at scene, vehicle rollover, **ejection >10 ft from an automobile, bicycle or motorcycle,** age greater than 75, Pregnant pt’s w/ an estimated gestational age >20 wks, pt meets “load and go” criteria.

**Index injuriesGI bleeding, urethral disruption, spinal cord injury

*** no penetrating injury in proximity to the lower GI tract, questionable spinal cord damage, severepelvic fractures with potential urethral disruption or open fractures in continuity with the rectal vault.

Clinical Bottom Line:

The rectal examination in trauma patients is currently over-utilized. There is sufficient evidence available to defer rectal examination in nearly all blunt trauma patients. Possible indications for rectal examination in these patients includes: elderly patients (>60-65 years of age), patients with abnormal mental status or questionable neurologic abnormalities, and injuries with potential rectal involvement. Additionally, the rectal

exam may add value in patients with questionable urethral injury. There is less compelling evidence in penetrating injuries; however, the above guidelines for blunt trauma could be applied to penetrating injuries in cases where spinal cord and rectal injury can be ruled out based on objective clinical findings. Additionally, hemoccult testing is not indicated in any trauma patient.

References:

G.Guldner, A. Brdzenski. The American Journal of Emergency Medicine, The sensitivity and specificity of the digital rectal examination for detecting spinal cord injury in adult patients with blunt trauma. Volume 24, issue 1. (Jan. 2006). Pp. 113-117.

Esposito, Ingraham, Luchette, Sears, Santaniello, Davis, Poulakidas, Gamelli. The journal of Trauma . Reasons to omit rectal exam in trauma patients: no fingers, no rectum, no useful additional information. Volume 59(6) (Dec. 2005). Pp 1314-1319.

Guldner, Babbitt, Boulton, O'Callaghan, Feleke, Hargrove. Academic Emergency Medicine. Deferral of the Rectal Examination in Blunt Trauma Patients: A clinical decision rule. Volume 11 (6). Pp. 635-641.

Porter, Ursic. The American Surgeon. Digital rectal examination for trauma: Does every patient need one? Volume 67 (5). Pp. 438-441.

Complications of the digital rectal exam:

Syncope, bradydysrrhythmias, torsades de pointe, myocardial infarction, ventricular fibrillation, death

References:

Munter, David and Stoner, Richard. American Journal of Emergency Medicine. Ventricular Fibrillation during rectal examination. Volume 7 (1). (January 1989). Pp. 57-60.

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Kostis, John. Chest. Ventricular Fibrillation during rectal examination in a patient with acute myocardial infarction. Volume 72 (2). August 1977. pp. 265-266.