Title

MP25-17 DOES ROUTINE REPEAT IMAGING CHANGE MANAGEMENT IN HIGH-GRADE RENAL TRAUMA? RESULTS FROM A LEVEL 1 TRAUMA CENTER

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catheter presence was 5.5 (interquartile range: 2-11) days. 86% of the catheters were introduced during hospitalization. The common indications for catheter insertion were urine output monitoring (58%), post-surgical status (20%) and urinary retention (14%). In a univariate model including postulated risk factors, a longer duration of catheter presence (p=0.001), patient immobility (p=0.025), internal ward hospitalization (p=0.045) and other skin ulcers (p=0.008) were all predictors of meatal and urethral damage, while catheter fixation (p=0.041) and a post-operative indication (p=0.037) were associated with reduced meatal and urethral damage.In a multivariate analysis, duration of catheter presence (p=0.017) and lack of catheter fixation (p=0.006) were significantly associated with meatal damage, with a trend for other skin ulcers (p=0.052).

CONCLUSIONS: Meatal damage is a common, preventable complication of indwelling catheters in males. Catheter fixation may have a preventative effect on this phenomenon. Longitudinal studies are needed to establish evidence-based guidelines on this matter.

Factors	Univariate analysis	Multivariate analysis
age	0.011 (p=0.248)	
Duration of catheter presence	0.047 (p=0.001)	0.044 (p=0.017)
Patient bedridden	0.85 (p=0.025)	0.786 (p=0.1)
Indications: output monitoring post operative urinary retention incontinence	 -0.59 (p=0.079) -0.96 (p=0.037) -0.077 (p=0.870) 0.57 (p=0.689)	-0.118 (p=0.862)
Catheter fixated	-0.86 (p=0.041)	-1.714 (p=0.006)
Is fixation side switched	-1.105 (p=0.183)	
ICU ward	0.67 (p=0.118)	
Internal ward	0.65 (p=0.045)	0.201 (p=0.667)
Current smoking	-0.70 (p=0.181)	
Vascular disease	0.55 (p=0.137)	
Diabetes Mellitus	-0.55 (p=0.133)	
Corticosteroid use	0.32 (p=0.553)	
Serum albumin < 3 mg/dL	-0.74 (p=0.842)	
Other skin ulcers	1.04 (p=0.008)	0.849 (p=0.052)
Constant (for multivariate model)		-1.89 (p=0.006)

Source of Funding: none

MP25-17

DOES ROUTINE REPEAT IMAGING CHANGE MANAGEMENT IN HIGH-GRADE RENAL TRAUMA? RESULTS FROM A LEVEL 1 TRAUMA CENTER

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INTRODUCTION AND OBJECTIVES: Management of renal trauma has evolved away from initial operative intervention for high-grade renal injuries. AUA current grade C guidelines call for routine re-imaging of grade 4-5 renal injuries at 48-72 hours. The aim of the current study is to evaluate the clinical utility of computed tomography (CT) re-imaging in high grade renal injuries.

METHODS: Data from 380 patients with renal trauma from 1998 to 2013 was reviewed. Injury grading was according to American Association for the Surgery of Trauma classification. Demographic, radiographic and clinical characteristics of patients as well as indications for repeat imaging was retrospectively reviewed.

RESULTS: Overall 118 of the 380 cases of renal trauma were high grade (grade 4-5). Nearly all cases with low grade injury (98.5%) were managed conservatively. Of the 118 cases with high grade renal trauma 63 patients were reimaged at our facility (58 grade 4, 5 grade 5). Re-imaging with CT was performed in 20 (32%) patients for clinical symptoms and in 43 (68%) patients who were asymptomatic. In the routine, asymptomatic group, an intervention was performed in 4 patients (9.3%): 3 cases of stent placement for subclinical expanding urinoma and 1 case of open exploration and drainage for an enlarging hematoma causing renal obstruction (Table 1). Average time to routine repeat imaging was 59 hours after initial imaging (range of 10 hrs and 34 mins to 197 hrs and 31 mins). Complete CT imaging was available for review in 25 of 43 routine reimaging cases. Of these 25 cases, collecting system injury was present in all cases where routine repeat imaging changed management. Wedge injury, medial injury, increased perirenal hematoma rim distance, and intravascular contrast extravasation were more common in these instances as well.

CONCLUSIONS: Our findings support the current guidelines recommending routine reimagining for high grade collecting system injuries, given that this led to a change in management in approximately 1 in 10 high grade renal trauma patients with asymptomatic collecting system injuries. Routine reimaging for high grade injuries without collecting system injury is not needed and these patients can be monitored clinically and with serial hematocrits.

Table 1 – Routine re-imaging and need for intervention in high-grade renal trauma

Renal Trauma Grade	Reimaging	Reimaging Routine	Intervention After Routine Imaging
Grade 4	58/95	40/58	4/40
Grade 5	5/23	3/5	0/3

Source of Funding: none

MP25-18

IMAGING FINDINGS ASSOCIATED WITH RENAL BLEEDING INTERVENTIONS AFTER HIGH-GRADE RENAL TRAUMA: RESULTS FROM THE AMERICAN ASSOCIATION FOR SURGERY OF TRAUMA (AAST) GENITO-URINARY TRAUMA STUDY

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INTRODUCTION AND OBJECTIVES: In high-grade renal trauma (HGRT), radiologic findings including hematoma rim distance (HRD), laceration location, and intravascular contrast extravasation (ICE) are proposed to be associated with interventions for renal hemorrhage. We aimed to assess the association of multiple imaging findings with renal bleeding interventions in a prospective multi-institutional study of HGRT.

METHODS: The GU Trauma Study is a multi-center prospective study including data on HGRT from 13 Level-1 trauma centers from 2014-2017. Patients with CT scans at presentation were included. 2 radiologists, blinded to outcomes, reviewed the scans for ICE, laceration location (lateral, medial, complex [lateral and medial]), HRD (largest measure from the edge of the kidney to the hematoma), and hematoma extension (subcapsular, peri-renal, para-renal [beyond the aorta on the left or IVC on the right or into the pelvis]). Renal bleeding interventions included: angioembolization, surgical packing, renorrhaphy, partial