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AB16. Renal trauma: epidemiology, management and the AUA guidelines

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Abstract: The kidney is the most common genitourinary organ injured from external trauma, occurring in 1-5% of all injuries. The vast majority of kidney injuries can be successfully managed nonoperatively. Blunt traumas are more frequent than penetrating. Penetrating trauma is more common in urban areas, is commonly caused by gunshot or stab wounds, and more commonly requires exploration. Blunt trauma results from falls from heights, motor vehicle and motorcycle crashes or blunt assaults. An estimated 2% of blunt injuries require exploration while over 50% of penetrating do.

Similar to other solid organ injuries such as spleen and liver, advances in staging techniques (computed tomography) have helped promote non-operative management of renal injuries. Nevertheless, certain severely injured kidneys require exploration and reconstruction, or rarely, removal. Advances in embolization techniques have produced a useful adjunct treatment modality for renal trauma. Ultimately, the objective of managing these patients is to stem life-threatening bleeding while retaining enough nephron mass to avoid end-stage renal disease.

Keywords: Renal trauma; AUA guidelines; epidemiology

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AB17. ADT treatment promotes PCa EMT and metastasis

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Abstract: Epithelial–mesenchymal transition (EMT) has been linked to cancer stem-like (CD44+) cell in the prostate cancer (PCa) metastasis. However, the molecular mechanism remains elusive. Here, we found EMT contributed to metastasis in PCa patients failed in androgen deprivation therapy (ADT). Castration TRAMP model also proved PCa treated with ADT promoted EMT with increased CD44+ stem-like cells. Switched CD44+ cell to EMT cell is a key step for luminal PCa cell metastasis. Our results also suggested ADT might go through promoting TGFβ1-CD44 signaling to enhance swift to EMT. Targeting CD44 with salinomycin and siRNA could inhibit cell transition and decrease PCa invasion. Together, cancer stem-like (CD44+) cells could be the initiator cells of EMT modulated by TGFβ1-CD44 signaling. Combined therapy of ADT with anti-CD44 may become a new potential therapeutic approach to battle later stage PCa.

Keywords: Androgen deprivation therapy (ADT); prostate cancer (PCa); Epithelial–mesenchymal transition (EMT)

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