

PEDIATRIC UROLOGY

Instituting a conservative management protocol for pediatric blunt renal trauma: evaluation of a prospectively maintained patient registry

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Purpose: Retrospective studies show that even high grade pediatric renal trauma can be safely managed conservatively. We evaluated a prospective patient registry at our level 1 pediatric trauma center, where patients with renal trauma were treated with an institutional review board approved conservative blunt renal trauma protocol. Standardized treatment included a trial of expectant management for all stable cases.

Materials and Methods: We identified 39 children with blunt renal trauma treated between 2003 and 2008. A strict conservative approach was used, ie nonoperative management in cases that were hemodynamically stable or had a favorable response with up to 2 units of blood transfused and no operative renal lesion on imaging. Adult imaging protocols were followed and exploratory laparotomy for nonrenal causes did not alter course of expectant renal management. Outcomes evaluated were injury grade, hematuria, operative management, length of stay and associated injuries.

Results: Based on the American Association for the Surgery of Trauma organ injury severity scale, 13 patients were considered to have grade I disease, 8 grade II, 11 grade III, 6 grade IV and 1 grade V. Conserva-

tive management resulted in a 97% nonoperative rate and a single renorrhaphy.

Conclusions: Using a prospective patient registry, this study demonstrates that conservative treatment of blunt pediatric renal trauma is safe and effective. Also, serious renal injuries are not missed by applying adult diagnostic imaging protocols in children.

Editorial Comment

These authors instituted a conservative management protocol for blunt renal trauma in pediatric patients that mirrored their adult protocol. This study reports on their five-year experience using the new protocol at their institution. They also used adult imaging guidelines to diagnose and categorize renal injuries. They had 39 patients with confirmed blunt renal trauma during this time frame and all but one was able to be managed conservatively. As expected, most of the injuries were lower grade injuries but they did have six Grade IV injuries and one Grade V injury. Endoscopic management or percutaneous drainage was still categorized as being conservative. When this new prospective data is combined with their prior retrospective experience, nearly 80% of pediatric patients with high-grade blunt renal trauma were able to be managed expectantly. This study helps provide further evidence that the adult approach of non-operative management for high-grade blunt renal trauma can be applied safely in hemodynamically stable children; however, long-term functional outcome data is still needed.

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