

Blunt renal trauma in children: experience with conservative management at a pediatric trauma center.

Margenthaler JA - *J Trauma* - 01-MAY-2002; 52(5): 928-32

From NIH/NLM MEDLINE

NLM Citation ID:

11988661 (PubMed)

Full Source Title:

Journal of Trauma

Publication Type:

Journal Article

Language:

English

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Abstract:

BACKGROUND: The authors reviewed the outcome for children with blunt renal injury managed with a nonoperative protocol at their pediatric trauma center. **METHODS:** Fifty-five consecutive children aged 0.5 to 17 years with blunt renal injury managed over a 14-year period were reviewed. All patients were evaluated with computed tomographic scanning. Injuries were graded according to the American Association for the Surgery of Trauma Organ Injury Scale. **RESULTS:** Forty-eight of 55 children (87%) were successfully managed nonoperatively. Overall, there were 5 grade I, 13 grade II, 18 grade III, 14 grade IV, and 5 grade V injuries. All children with grades I and III injuries were successfully managed nonoperatively. Two (6%) of these children required transfusion. Only four (29%) children with grade IV and three (60%) with grade V injuries required surgical interventions (one nephrostomy, six nephrectomies). Excluding patients with continuing hemorrhage, only 2 (14%) of 14 with high-grade injuries required surgical intervention (1 nephrostomy, 1 nephrectomy). Clearance of **gross hematuria** correlated with severity of injury and was prolonged in grade IV and V compared with grade I to III injuries (6.8 +/- 2.7 vs. 3.2 +/- 2.1 days, respectively; $p < 0.05$). Fifty-one children (93%) available for follow-up were normotensive with normal renal function. **CONCLUSION:** These data support the use of conservative management for all grades in stable children with blunt renal injury. Transfusion

requirements, operative rates, and outcome are consistent with other pediatric solid organ injuries.

Major Subjects:

- Hospitals, Pediatric / * statistics & numerical data
- Kidney / * injuries / radiography
- Outcome Assessment (Health Care)
- Trauma Centers / * statistics & numerical data
- Wounds, Nonpenetrating / radiography / * therapy

Additional Subjects:

- Adolescent
- **Child**
- **Child**, Preschool
- Female
- Humans
- Infant
- Male
- Retrospective Studies
- Tomography, X-Ray Computed
- Trauma Severity Indices

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