Papers That Should Change Your Practice: A Year in Review of Pediatric Trauma

Robert Letton Jr., MD
Richard Kruse, DO
Marc Auerbach, MD
Joseph H. Piatt, Jr. MD
Garet Free, BBA, NRP, FP-C, CCP-C
Treatment trends in adolescent clavicle fractures


Increase in surgical treatment

Lack of high-level studies comparing outcomes of operative and conservative to justify this recent trend

Is there a deficit after nonoperative versus operative treatment of shortened midshaft clavicular fractures in adolescents?

*(J Pediatr Orthop* 2015;00:000–000)

Shortened midshaft clavicular fractures had excellent outcomes after both operative and non-operative treatments

No subjective or objective differences were observed between treatment groups

Sports participation and radiographic findings of adolescents treated nonoperatively for displaced clavicle fractures


Fracture shortening and sports participation do not have a significant impact on outcomes in adolescents after displaced midshaft clavicle fracture
The Prevalence of Bruising Among Infants in Pediatric Emergency Departments
Mary C. Pierce, MD*; Julia N. Magana, MD; Kim Kaczor, MS; Douglas J. Lorenz, PhD; Gabriel Meyers, MSW; Berkeley L. Bennett, MD, MS; John T. Kanegaye, M. Annals of Emergency Medicine, July 2015

- Bruising is the most common initial injury noted in physical abuse
- Prevalence of bruising unknown in infants presenting to PEDs

- Patients: 2488 infants < 12 months presenting to 3 PEDs
  - Excluded referrals for abuse, coagulation abnormality, skin dx, neuromuscular dx
- Intervention: Complete skin exam for bruising
- Outcome: Prevalence of bruising +/- abuse evaluation
  - 3.5%–88/2488 (1.3% medical complaint)
  - < 6 months: 1.3% prevalence (50% abuse evaluation) (0.2% medical complaint)
  - Abuse evaluations: 23% < 12 months, 50% < 6 months

- Clinical implications
  - ALL infants in gowns may improve detection of bruising and physical child abuse
  - Many infants with bruising do not have abuse evaluations

- Don’t cruise, Don’t bruise
- No bruise ≠ No trauma  Bruise ≠ No trauma
Isolated Linear Skull Fractures in Children With Blunt Head Trauma

Elizabeth C. Powell, MD, MPH, Shireen M. Atabaki, MD, MPH, Sandra Wootton-Gorges, MD, David Wisner, MD, Prashant Mahajan, MD, MPH, MBA, Todd Glass, MD, MS, Michelle Miskin, MS, Rachel M. Stanley, MD, MHSA, Elizabeth Jacobs, MD, Peter S. Dayan, MD, MSc, James F. Holmes, MD, MPH, Nathan Kuppermann, MD, MPH

- **Pediatrics 135:e851-857, 2015**
- 350 infants or toddlers who had CT scans with(out) skull rads. Exclusions. 201 admitted; 149 discharged from ED. 62 repeat scans. Zero neurosurgical interventions [95% CI 0 to 0.009].
- Young children with ILSFx and normal neuro exam and mental status do not need to be admitted.
- Or transferred to a Level 1 center!!!
Prehospital Pain Management in Children With Traumatic Injuries

Anna Rutkowska, PhD and Grazyna Skotnicka-Klonowicz, MD, PhD
Pediatr Emer Care 2015; 31: 317-320

• **Key points:** Of 489 children requiring emergency analgesia, only 159 received analgesics.

• **Conclusion:** Analgesia in the pre-hospital setting is inadequate for pediatric trauma patients.

• **Why important to your practice:** Additional research is needed, but collaboration between EMS, peds EM and peds trauma surgery is needed for protocol optimization and to provide better care.
A GRADE based analysis to assess the evidence supporting a physiologic based guideline for the management of pediatric solid organ injury

The original APSA guideline for pediatric blunt solid organ injury was instrumental in improving care, but sufficient evidence now exists for an updated physiologic based management guideline

There is a high degree of variability in the management of SOI in pediatric and adult trauma centers. While no algorithm can replace clinical judgment this algorithm defines failure end-points and shortens the stay and resource utilization for patients with no signs of bleeding

J Trauma Acute Care Surg. 2015;79: 683-693.