Casting Rather Than Surgery for Medial Epicondyle Fractures in Children

Take Home Point: In this randomized trial, treatment for pediatric displaced medial epicondyle fractures with casting alone was noninferior to the traditional surgical fixation and casting at the 12-month follow-up period.

Citation: Grahn P, Helenius I, Hämäläinen T, et. al. Casting vs Surgical Treatment of Children With Medial Epicondyle Fractures: A Randomized Clinical Trial. *JAMA Netw Open*. 2025 May 1;8(5):e258479. doi: 10.1001/jamanetworkopen.2025.8479.

Relevance: Medial humeral epicondyle fractures account for 12-20% of all pediatric elbow fractures. There is currently no consensus regarding the treatment of displaced medial epicondyle fractures in children.

Study Summary: This was a multicenter, parallel group, noninferiority, nonblinded randomized clinical trial that compared operative vs nonoperative treatment of pediatric displaced medial epicondyle fractures of patients from 4 university hospitals in Finland. Participants aged 7-16 years presenting to the emergency department (ED) with a medial epicondyle fracture were screened for eligibility by a consultant orthopedic surgeon and randomly assigned (1:1) to operative or nonoperative treatment. In the nonoperative casting group, a long arm cast was applied for 4 weeks with the elbow at 90° of flexion and the forearm in neutral supination. The primary outcome was the Quick Disabilities of the Arm, Shoulder, and Hand (QDASH) score at 12 months.

In all, 72 patients were randomized: 37 to the surgery group and 35 to casting. The authors found no statistically significant differences in QDASH scores between the surgery and cast groups at 1, 3, or 6 months or at the end point of the study. At the end of the study, none of the casting group required additional support, and there was no cross over of patients from the casting group to surgical group throughout the study.

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Editor's Comments: The small sample size and location of recruitment of patients from university hospitals in Finland does limit its generalizability to urgent care (UC) practices. The nuanced nature of the study that focused solely on displaced medial epicondyle fractures also does not allow for extrapolation of these findings to other elbow fractures and dislocations. There is much that still needs to be agreed upon, particularly in the orthopedic specialty regarding elbow injuries, which requires UC clinicians to follow the locally agreed upon protocols and accepted orthopedic guidelines for these injuries. This study does allow for discussions between UC clinicians and their orthopedic counterparts around the best options for treatment for children with elbow injuries and may lead to collaborative investigations in the future. ■

Are Clinical Decision Rules Useful in Determining Septic Arthritis in a Limping Child?

Take Home Point: Septic arthritis (SA) is an uncommon finding in pediatric emergency department (ED) patients with an acute limp. However, the present clinical decision rules (CDR) are not robust enough in an ED population of patients to be useful.

Citation: Tu J, Lam S, Yamano C, et al. Test characteristics of clinical findings and clinical decision rules for the diagnosis of septic arthritis in children with an acute limp presenting to the emergency department: a prospective observational study. *Emerg Med J*. 2025;42:360–366.

Relevance: Nontraumatic lower limb pain is a common pediatric ED presentation with a broad differential diagnosis. The present CDRs have been developed by orthopedic teams, and their application to ED/UC populations has yet to be fully studied.

Study Summary: This was a prospective observational study of children presenting to 3 EDs in Melbourne, Australia, with atraumatic acute limp. Eligible children were enrolled, and data was collected from their hospital records. Participant families were contacted by phone initially, at the 1–2-week period, and at the 2–4-week period for a final diagnosis. Diagnosis of SA was determined from the clinical notes that were available for recruited patients—initial ED documen-

tation, subsequent documentation, and family reports of further hospital visits. The septic arthritis CDRs (Kocher's Rule and Caird's Rule) were applied.

Of the 147,754 ED encounters during the study period, the authors identified 535 patients with atraumatic acute limp who met inclusion for final analysis. They found 14 (2.6%) patients diagnosed with SA with an overall prevalence of 0.095 per 1,000 (95% confidence interval [CI] 0.054 per 1,000 to 0.163 per 1000) ED presentations. In the study, 13 of the patients diagnosed with SA had an initial presumed diagnosis in ED. Application of Kocher's Rule and Caird's Rule showed a 72% and 78% chance, respectively, of ranking a positive case higher than a negative case. The strongest predictors of septic arthritis in the study cohort were reduced range of motion of the affected joint, poor mobility (an inability to weight-bear), signs of systemic disease, and the presence of fever. However, the absence of these findings was less useful, with negative likelihood ratios ranging from 0.3 to 0.87.

Editor's Comments: The lack of a standardized definition of SA limited the authors in independently verifying their cohort. There is lack of generalizability to some UCs due to their lack of ability to perform CDR required blood tests, although it was noted to be not a useful conduit for detection of SA by the authors. These cases remain difficult diagnostic conundrums, and UC clinicians may want to err on the side of caution with referrals to the ED or same day orthopedic services to get their patients evaluated. There are opportunities for UC-specific work to be done in this area to distinguish those patients who need a referral, from those for whom watchful waiting may be appropriate. ■

The Impact of Timing of Inhaled Corticosteroid Use in Asthma

Take Home Point: In patients with asthma, mid-afternoon dosing of beclomethasone dipropionate (BDP) has better clinical outcomes without increasing steroid- related morbidity or costs.

Citation: Wang R, Maidstone R, Singh D, et al. The impact of dosage timing for inhaled corticosteroids in asthma: a randomised three-way crossover trial. *Thorax*. 2025 Apr 15:thorax-2024-222073. doi: 10.1136/thorax-2024-222073

Relevance: Being able to align asthma medication administration and dosing to biological rhythms of disease will help increase drug efficiency while minimizing medication harm and or side effects.

Study Summary: This was a randomized, open-label, 3-way crossover trial of BDP 400 µg daily dose administered once in the morning (between 8AM-9AM), one in the mid-afternoon (between 3PM-4PM), and 200 µg twice a day (between 8AM-9AM and between 8PM-9PM) in participants with mild to moderate atopic asthma. Peak flow meters and diary cards (morning and evening peak expiratory flow [PEF]), salbutamol (albuterol) use, adverse events, and medication adherence were recorded. Participants were asked to complete each routine for a period of 28 days with a subsequent washout period of 14-21 days without any treatment.

Overall, 25 participants were recruited into the study, and 21 participants (84%) completed all the components of the study. The authors found that all treatment regimens improved lung function. The greatest improvement in forced expiratory volume within 1 second was in the 3PM-4PM schedule compared to both the 8AM-9AM schedule and the twice daily schedule. There was modest improvement in forced vital capacity following the midafternoon routine compared with morning dosing routine (p=0.01). There was no difference in PEF among treatment regimens.

Editor's Comments: There were several limitations to the study, namely the small sample size, limited therapeutic period reviewed, and limited follow-up period. The use of inhaled corticosteroids as the agent of choice limits its generalizability to other inhaled asthma therapies including long-acting beta-agonists, long-acting muscarinic receptors, and leukotriene receptor antagonists. This trial does highlight the need for more evidence surrounding timing of medications when used in diseases that may have physiological timing burdens. UC clinicians may consider this study when counselling patients on the timing of asthma medication administration. ■

Suicide Risk Screening: Are We Asking the Right Questions?

Take Home Point: The predictive accuracy of a patient suicide risk assessment (SRA) improves significantly when clinicians incorporate information regarding recent suicidal thoughts and behaviors.

Citation: Bentley K, Kennedy C, Khadse P, et. al. Clinician Suicide Risk Assessment for Prediction of Suicide Attempt

in a Large Health Care System. *JAMA Psychiatry.* 2025 Jun 1;82(6):599-608. doi: 10.1001/jamapsychiatry.2025.0325.

Relevance: Suicide is the fifth most common cause of death among those aged 10-64 years with 90% of those dying from suicide having seen a healthcare professional within a year of death (>50% within the prior month).

Study Summary: This was a retrospective, electronic health record–based, prognostic study to assess the predictive accuracy of SRAs by clinicians in the Mass General Brigham health system. The authors collected data from SRAs that were documented and collected during clinical encounters with patients in outpatient settings (general medical or psychiatric), inpatient settings (general medical or psychiatric), or in the emergency department. Outcomes reviewed were subsequent ED visits with an ICD-10 classified suicide attempt within 90-180 days of the initial encounter. The SRA was designed to assess suicidal thoughts and behaviors (intent, plan, prior attempts), along with risk factors (depressed mood, recent loss), and protective factors (social support).

The authors reviewed 812,114 SRAs conducted by 2,577 clinicians at 12 hospitals among 89,957 patients: 86.13% were outpatient encounters; 9.45% were inpatient encounters; and 4.42% were from the ED. The suicide rate in outpatient encounters was: 0.12% within 90 days and 0.22% within 180 days; 0.79% within 90 days and 1.29% within 180 days for inpatients; and 2.40% within 90 days and 3.70% within 180 days for ED encounters. The authors found that clinicians estimated patients' suicide risk at levels significantly better than chance and this improved with incorporating all the factors in the SRA.

Editor's Comments: This is an important consideration that most UC clinicians may perhaps overlook when performing routine daily consultations. It is therefore key that we consider mental health related factors when assessing and addressing our patients. Using simple SRA tools in discreet ways that are incorporated into routine conversations and consultations may help with identifying those who potentially may need additional support. ■

New Legal Standards in Medical Malpractice

Take Home Point: In the new standard of care provided by the American Law Institute (ALI), there is a shift away from reliance of medical custom and an invitation for courts to incorporate evidence-based practice into malpractice law.

Citation: Aaron D, Robertson C, King L, et. al. A New Legal Standard for Medical Malpractice. *JAMA*. 2025 Feb 26. doi: 10.1001/jama.2025.0097.

Relevance: Unfortunately, up to one-third of physicians can expected to be sued for malpractice at least once in their careers. Although medical liability insurance provides compensation to those affected, it has not been consistently shown to address quality of care concerns.

Study Summary: This was a special communication review of the first ever ALI restatement of malpractice law, describing the new legal standards, its significance for healthcare professionals and organizations—particularly around 3 areas: clinical care; communicating with patients; and the practice environment.

The authors note that in legal standard of care, the approach of the "reasonable person" standard has been a feature of modern tort law nationwide. The restatement from the ALI centers medical negligence on reasonable care rather than on customary care. It takes into account the "resources available to the provider in the particular location or practice setting" in assessing the reasonableness of the care. In practicing latest evidence-based standards, the restatement identifies adherence to appropriate guidelines as sufficient evidence that the standard of care has been met. However, nonadherence to guidelines remains insufficient to establish negligence. In the use of informed consent, this care standard recognizes that patients have choices among different treatment options rather than just the right to refuse treatment altogether.

Editor's Comments: This is an encouraging step in the direction of improved quality of care for patients and decreasing defensive medicine. The restatement makes suggestions that the courts can use to ensure that the present-day best practices, that are evidence-based and up to date, are applied to the treatment of all patients. The main caveat for this article is that there is dependence on individual state courts to interpret and enact the ALI statement accordingly. UC clinicians should recognize that, at least for now, many courts will continue to rely significantly on prevailing customary practice in assessing medical liability. ■

Simple Sensory Test to Evaluate Hand and Finger Injuries

Take Home Point: The Ten Test, a newer sensory test, is a

reliable and reproducible test to evaluate sensory function of the hands/fingers which is fast and easy to implement in any clinical space.

Citation: Lothet E, Lacy A, Odom E. The Ten Test and Sensory Evaluation of Hand and Finger Injuries in the Emergency Department. *J Emerg Med*. 2025;71:54-59. doi: 10.1016/j.jemermed.2024.10.008.

Relevance: Hand and finger injuries are a common presentation to both emergency departments and urgent cares. There are various methods to evaluate sensory function and being able to communicate sensory findings clearly to other specialists is important for UC clinicians.

Study Summary: This was a descriptive review article examining various published hand and finger sensory-evaluation methods. The authors describe the 2-point discrimination (2PD) test, along with other methods discussed in plastic and orthopedic hand literature. These include the Semmes-Weinstein monofilament (SWM) test, the Weinstein Enhanced Sensory Test (WEST) test, and the Ten Test (TT). The authors describe the TT as a suitable and quick alternative test in busy ED settings to assess hand and finger sensation.

The TT was developed, and validated, to be a simple and reliable test in the late 1990s. The test is performed by presenting a stimulus in the form of moving light touch to an unaffected or uninjured digit. This normal stimulus should be given a 10 on a 1-10 scale by the patient. The normal digit and the affected digit are then touched simultaneously, and the patient should be asked to rate how the affected finger compares to the normal finger on the 1-10 scale. The authors note that the TT compares favorably to the WEST and SWM tests in previous literature. When compared with the 2PD test, the TT was found to perform better at early sensory loss identification.

Editor's Comments: This is an interesting test that appears to be simple, easy to perform and has useful daily applications in busy UCs. The nonreliance on any equipment makes it a simple tool for any UC clinician to incorporate into any hand injury assessment. The limitation of this technique is its reliance on the ability to compare with a contralateral innervated body part with the same dermatome. Additionally, difference in pressure applied by the examiner between hands could lead to variable patient-reported results. This is nonetheless an easy test that clinicians may be encouraged to incorporate (potentially as a screening tool) in any UC consultation that requires sensory hand or finger examination. ■