



ABSTRACTS IN URGENT CARE

- Rude Patients May Be in for a Fall
- Immobilizing ‘Boxer’s Fractures’
- Take Croup Without Stridor in Stride
- Tramadol: Safer for Acute Pain, or Not?
- Usefulness of ECGs in Detecting Hyperkalemia
- *V vulnificus* May Be Heading Your Way

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Practice of Urgent Care: Rude Patients May Do More than Ruin Your Mood

Key point: Individual and team performance of clinicians suffer in both quality of diagnostic approach and procedural skills when dealing with rude patients.

Citation: Riskin A, Erez A, Foulk TA, et al. The impact of rudeness on medical performance: a randomized trial. *Pediatrics*. 2015;136(3):487-495.

Patients in urgent care commonly have unrealistic demands and expectations. When they make disparaging remarks, it's easy to feel scrutinized and under pressure. I've often felt distracted in such situations myself, only to subsequently discover, upon further reflection, that I'd prescribed the wrong medication or failed to consider another possible diagnosis. Apparently, I'm not alone.

In this innovative study, Israeli researchers randomized teams of physicians and nurses to perform a simulated resuscitation of a very sick neonate under one of two scenarios: with a neutral family member present or with a rude family member present. Videos of the teams' performances were later reviewed by several judges blinded to whether the team was exposed to a rude family member or not.

Interestingly, but perhaps unsurprisingly, the teams who were faced with the challenging resuscitation under the duress of rude comments from a family member performed significantly worse in diagnosing the neonate's critical illness, performing necessary procedures to intervene, and functioning as a team. Overall, approximately half of the variance in performance

between teams could be explained by rudeness.

Prior psychological research has demonstrated that being exposed to incivility negatively impacts working memory, the RAM-type processing ability of our brains. This may mechanistically explain why clinicians perform worse when dealing with impolite or demanding patients.

Certainly, this knowledge does nothing to reduce the chances that we will deal with a rude patient on our next shift. However, it does arm us with the knowledge that we are entering into an especially error-prone mental state in such scenarios and, therefore, increased vigilance is advisable to avoid cognitive errors. So, while spending as little time interacting with uncivil patients may be tempting, it would be wiser to develop a habit of increasing the diligence of our clinical approach when we recognize we have a rude patient in front of us. ■

Do All Boxer's Fractures Need to Be Splinted?

Key point: Patients with uncomplicated fifth metacarpal fractures recover equally well whether the finger is splinted or buddy taped (and miss less work with taping).

Citation: Pellatt R, Fomin I, Pienaar C, et al. Is buddy taping as effective as plaster immobilization for adults with an uncomplicated neck of fifth metacarpal fracture? A randomized controlled trial. *Ann Emerg Med*. 2019;74(1):88-97.

Despite the name, boxer's fractures occur in many populations. In fact, most fifth metacarpal (MCP) fractures occur in nonfighters, with the fracture occurring because someone without training has punched a hard object with his bare hand. For this reason, it is almost always a dominant hand injury.

Immobilizing a young person's dominant hand for several months is a big decision. These Australian investigators performed a randomized controlled trial of 97 patients with uncomplicated fifth MCP fractures to determine if there is any benefit



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in hand function from immobilization. Half were randomized to plaster splinting and half to “buddy taping” of the pinky to the ring finger. The primary outcome of interest was functional status at 3 months. Multiple secondary outcomes, including days of work missed, were investigated.

At the end of the study period, both groups showed similar (and essentially complete) recovery on average. Not surprisingly, though, patients in the buddy taping group missed significantly less work. Based on these results, buddy taping alone for uncomplicated boxer’s fractures seems like a reasonable, perhaps even preferable approach. This, however, was a small study and it is important to ensure that the hand specialist following up with the patient is also comfortable with this strategy, as splint immobilization remains the standard of care. ■

No Stridor, No Problem!

Key point: Pediatric patients with croup without stridor appear to be at very low risk of significant complications. Normal heart rate and absence of fever and chronic medical issues also portend lower risk in children with croup.

Citation: Elder AE, Rao A. Management and outcomes of patients presenting to the emergency department with croup: can we identify which patients can safely be discharged from the emergency department? *J Paediatr Child Health*. February 18, 2019. [Epub ahead of print]

Cases involving concern for pediatric airways can be anxiety-provoking, even for the experienced provider. Croup is a common urgent care presentation, and the characteristic findings of barking cough and stridor arise specifically from upper airway obstruction. Thankfully, most patients with croup will do well, but which patients are at risk for rapid clinical decline?

In this retrospective cohort study, the investigators reviewed the charts of over 5,000 pediatric patients between the ages of 6 months and 6 years presenting to an Australian ED over a 5-year period. They then subsequently examined 112 patients requiring at least two doses of nebulized racemic epinephrine. Among the patients that were admitted, only about one in five required further intervention. No discharged patient had any adverse events. Among admitted patients, those with stridor, sig-

nificant tachycardia, younger age, fever, and prior chronic medical conditions were most likely to require further intervention.

While this was an ED study, we can feel reassured that patients without stridor who are appropriately treated in urgent care with steroids and racemic epinephrine and who are without stridor are unlikely to have clinical decline after discharge if they appear stable at that time. It still seems prudent to observe children who had stridor which resolves with racemic epinephrine treatment for 1-2 hours in urgent care to ensure that they remain well-appearing and comfortable. Based on this study, we should be more cautious and give stricter return precautions for younger children; those with chronic medical conditions; and those with abnormal vital signs; and have a lower threshold for ED referral with these patients, as well. ■

Is Tramadol Really as Safe an Opioid as We’d Like to Believe?

Key point: Despite common beliefs to the contrary, tramadol does not carry a lower risk of dependence and chronic use than other oral opioids.

Citation: Thiels CA, Habermann EB, Hooten WM, Jeffery MM. Chronic use of tramadol after acute pain episode: cohort study. *BMJ*. 2019;365:l1849.

Tramadol is a weak μ -opioid receptor agonist with serotonin and norepinephrine reuptake effects. It was first approved by the FDA in the U.S. in 1995 and remained entirely unscheduled by the DEA until 2014, when it became a schedule IV medication. For these reasons, it has largely been thought of something like an “opioid lite” and prescribed for patients because it was believed to have a lower potential for dependence, abuse, and diversion.

More recent evidence, however, suggests that the perceived relative safety of tramadol is likely a misconception. This study adds to that body of research. Investigators reviewed over 400,000 Medicare patients undergoing elective surgical procedures from 2009 to 2018 and their subsequent duration of opioid use postoperatively. They adjusted for type of surgical procedures, as well as postoperative pain severity and duration. Hydrocodone and oxycodone were the most commonly prescribed opioids among these patients, comprising over 90% of prescriptions. Tramadol was a distant third.

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Ideally, patients undergoing surgery would quickly be titrated off of opioid analgesics and not require them for a prolonged period of time (>90 days was the definition of “prolonged use” in this study). In both of these domains, tramadol performed significantly worse than other short-acting opioids. Patients prescribed tramadol were 6% more likely to still require prescription analgesia >3 months after surgery. More significantly, though, patients taking tramadol had a 47% greater relative risk of persistent use (>90 days of continuous use) compared with other short-acting opioids, paradoxically suggesting a much higher risk of dependence among patients prescribed tramadol compared with other short-acting opioids.

Based on the pharmacology of tramadol, the authors posit that one reason for this may be that while the tramadol parent compound shows weak μ -opioid receptor activity, the majority of patients rapidly metabolize it to O-desmethyltramadol, which has a 700x greater affinity for the receptor. This suggests that tramadol functionally acts like a much stronger opioid agonist. Regardless of mechanism, this study adds to mounting evidence that tramadol is simply not the safe opioid it has been touted to be. ■

The EKG: A Specific, but Insensitive, Test for Hyperkalemia

Key point: When present, EKG changes of hyperkalemia are highly suggestive of elevated serum potassium. Absence of EKG changes, however, does not rule out significant hyperkalemia.

Citation: Rafique Z, Aceves J, Espina I, et al. Can physicians detect hyperkalemia based on the electrocardiogram? *Am J Emerg Med.* April 22, 2019. [Epub ahead of print]

Hyperkalemia is the most immediately life-threatening electrolyte abnormality, and the symptoms of this are often vague and nonspecific. Unfortunately, most urgent care centers do not have access to rapid serum chemistry testing and, therefore, an alternative method of excluding significant hyperkalemia is desirable. In training, we are taught about the characteristic EKG manifestations of elevated potassium, including peaked T-waves and widened QRS complexes. However, it is unclear how reliably these findings can be used to identify hyperkalemia.

The authors of this study reviewed over 500 EKGs from end-stage renal disease (ESRD) patients receiving emergent hemodialysis at a Texas county hospital, then compared the EKG findings to the patient’s serum potassium value at the time the EKG was recorded. They found that EKG was poorly sensitive for detecting clinically significant hyperkalemia (sensitivity = 19% for K >6.0 mEq/L and 29% for K >6.5 mEq/L). However, the specificity of the EKG for significant hyperkalemia was much better (95%-97%).

These findings indicate that concerning EKG changes can

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reliably rule in hyperkalemia; however, absence of changes on EKG cannot rule out elevated serum potassium levels. One caveat worth mentioning is that these patients all had ESRD and experienced elevated potassium more frequently than would patients without chronic kidney disease. The results may not be generalizable to a more typical urgent care population. Regardless, it seems that there is insufficient evidence to suggest that a normal EKG has a role in excluding the possibility of hyperkalemia. ■

Vibrio vulnificus Is on the Move!

*Key point: Cases of serious infection due to *Vibrio vulnificus* are occurring at increasingly northern climes in the eastern coastal U.S.*

Citation: King M, Rose L, Framow H, et al. *Vibrio vulnificus* infections from a previously nonendemic area. *Ann Intern Med.* June 18, 2019. [Epub ahead of print]

Vibrio vulnificus is a frightening pathogen. It lives in marine and brackish water environments and can cause life-threatening skin infections (ie, necrotizing fasciitis), as well as bacteremia after ingestion in susceptible patients. Historically, *V. vulnificus* was restricted to relatively southern bodies of water; however, with trends of warming surface waters, the bacterium appears to be migrating northwards.

This article outlines five cases of severe *V. vulnificus* infections resulting from exposures around Delaware Bay. All patients had history of handling seafood (eg, crabbing, abrasions from shellfish) and presented with classic symptoms of cellulitis. Three of the patients suffered from chronic hepatitis, one had diabetes, and one had Parkinson’s disease. All patients developed necrotizing fasciitis; one patient died.

Cellulitis is a common urgent care diagnosis, and most patients will go on to have a benign course. However, in patients with chronic diseases (especially cirrhosis or other chronic liver disease) and wounds from a marine environment, *V. vulnificus* as a causative agent should be strongly considered. It can be rapidly progressive and generally requires alternative antibiotics than those used for more common skin infections. ■