



ABSTRACTS IN URGENT CARE

- Telltale Signs of Testicular Torsion
- Preventing RSV in Young Patients
- Lactational Mastitis

■ IVAN KOAY, MBChB, FRNZCUC, MD

- Cephalexin in Cellulitis
- Understanding Pain in Children
- Post-COVID Smell Dysfunction

Does My Patient Have a Testicular Torsion?

Take-home point: Symptoms most suggestive for testicular torsion (TT) are adolescent/pubertal age, palpated hard testicle, and the presence of nausea and vomiting associated with acute scrotal pain.

Citation: Lukosiute-Urboniene A, Nekrosius D, Dekeryte I, et al. Clinical risk factors for testicular torsion and a warning against falsely reassuring ultrasound scans: a 10-year single-centre experience. *Emerg Med J.* 2023;40:134–139.

Relevance: As symptoms of TT can be mimicked by other causes of acute scrotal syndrome (ASS), it is important to know which characteristics are most indicative of torsion to speed up diagnosis and facilitate appropriate treatment.

Study summary: This retrospective observational study was conducted in the largest tertiary healthcare institution in Lithuania. Medical records from the ED and pediatric surgical department were used. Patients were categorized into two groups: those with TT and those with other acute scrotal syndrome causes—testicular appendage torsion (TAT), trauma, and acute epididymo-orchitis (EO).

The authors identified 555 children (0–17 years of age) with acute scrotal syndrome who were included in the study: TT 196 (35%); TAT 228 (41%); EO 97 (18%); and testicular trauma 34 (6%). TT had the highest incidence in the age group of 13–17 years (OR 8.39) while other acute

scrotal pain causes were mostly observed in the age group of 7–12 years ($p < 0.001$). Patients in the TT group more commonly presented with nausea/vomiting ($p < 0.001$), abdominal or groin pain ($p < 0.001$ and $p = 0.009$, respectively), hard testis ($p < 0.001$), and scrotal edema ($p = 0.001$). Palpable torsed testicular appendage ($p < 0.001$), blue dot sign ($p < 0.001$), and scrotal erythema ($p = 0.001$) were more frequently observed in the other ASS causes group. Ultrasound with Doppler was notably unreliable with normal testicular blood flow noted in 75 cases (41.7%) of TT. Hypoechoic zones were found more often in patients with TT diagnosis ($p < 0.001$)

Editor's comments: This study was retrospective and only examined patients <18 years of age. It is noteworthy that, among associated symptoms, nausea and vomiting were most suggestive of torsion. Additionally, scrotal ultrasound was “normal” in over 40% of cases of TT. It is important to note that ultrasound technology has improved and interpretation of US is radiologist-dependent. ■

Use of Monoclonal Antibodies to Prevent RSV Infection in Infants and Children

Take-home point: In this study, motavizumab, nirsevimab, and palivizumab were associated with substantial benefits in the prevention of respiratory syncytial virus (RSV) infection-associated morbidity.

Citation: Sun M, Lai H, Na F, et al. Monoclonal antibody for the prevention of respiratory syncytial virus in infants and children: a systematic review and network meta-analysis. *JAMA Network Open.* 2023;6(2):e230023.

Relevance: Finding effective prevention and treatment for common viral upper respiratory infections remains an on-



Ivan Koay MBChB, MRCS, FRNZCUC, MD is an urgent care physician and medical lead, Kings College Hospital Urgent Treatment Centre, London, UK; convenor faculty na hÉireann and United Kingdom Royal New Zealand College of Urgent Care; and Independent Assessor, European Reference Network, Andalusian Agency for Healthcare Quality.

“Inflammatory breast cancer is rare, but should be considered as a potential diagnosis in patients with persistent mastitis as the diagnosis may be delayed during lactation.”

going clinical challenge. This paper highlights several options for the prevention of RSV infections.

Study summary: This was a systemic review and meta-analysis following the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) reporting guidelines. Eligible studies were identified from the PubMed, Embase, CENTRAL, and ClinicalTrials.gov databases. The review focused on the use of monoclonal antibodies (mAbs) and the prevention of various clinical outcomes, including all-cause mortality, rate and duration of RSV-related hospitalization, rate of RSV infection, drug-related adverse events, duration of intensive care unit admission, use of supplemental oxygen, and use of mechanical ventilation (MV) use.

The authors included 15 randomized controlled trials (RCTs), involving 18,395 participants with a mean age of 4 months in the meta-analysis. They found moderate-to-high certainty that motavizumab, nirsevimab, and palivizumab were associated with reducing the rate of RSV and RSV-related hospitalizations compared with placebo. Motavizumab and palivizumab were associated with reduced risk of ICU admission. There was no significant difference in all-cause mortality or adverse drug-related events.

Editor’s comments: There were insufficient data to perform subgroup analyses for individual comorbidities (eg, bronchopulmonary dysplasia, congenital heart disease, or chronic lung disease). No change in overall mortality was seen, which is not unexpected given the effectiveness of supportive care; however, for high-risk infants, mAbs may hold promise in preventing serious illness and hospitalization.

It is unlikely these treatments will be available in the urgent care setting; however, it would be worth informing the parents of infants with cardiopulmonary disease of these treatments during RSV season. ■

An Evidence Review of Lactational Mastitis

Take-home point: Use of over-the-counter nonsteroidal and analgesic medications can reduce antibiotic overuse and improve outcomes for women who are breastfeeding and their children.

Citation: Louis-Jacques A, Berwick M, Mitchell K. Risk factors, symptoms, and treatment of lactational mastitis. *JAMA*. 2023;;329(7):588-589.

Relevance: Breastfeeding is associated with better health outcomes for both mother and child. Improved understanding of lactational physiology has led to change in guidelines regarding the management of mastitis with a growing emphasis on conservative and nonpharmaceutical interventions.

Study summary: This was an educational overview of lactational mastitis. The authors reviewed the anatomy and physiology of the human mammary gland, as well as the symptoms, risk factors, and treatment of mastitis in the setting of breastfeeding. Lactational mastitis may be infectious or noninfectious. Women typically present with unilateral breast pain, warmth, and erythema, which may be localized or involve the whole breast. The most common systemic symptoms of lactational mastitis are malaise (87%), fever (82%), and chills (78%).

Accumulating evidence suggests that immediate initiation of antibiotics may not be necessary for some patients. Patients eligible for a trial of conservative treatment are those with mild systemic symptoms, focal breast findings, and improvement without antibiotic therapy during a 24- to 48-hour period of observation. Conservative treatment consists of rest, continuing physiologic breastfeeding/milk expression, and over-the-counter nonsteroidal and analgesic medications. Physiologic breastfeeding consists of feeding on cue or otherwise expressing the volume of milk that the child needs. Excessive use of breast pumps can result in nipple trauma and should be avoided. Cold pack application can provide symptomatic relief and reduce edema, hyperemia, and inflammation.

Those with more severe initial presentation or who do not improve with conservative measures should be treated with antibiotics. The first-line antibiotic regimens include dicloxacillin or cephalexin for 10 to 14 days. Breastfeeding and/or milk expression is safe during treatment.

Inflammatory breast cancer is rare, but should be considered as a potential diagnosis in patients with persistent mastitis as the diagnosis may be delayed during lactation. Abscess is an additional consideration for cases that do not respond to antibiotics. Abscess is confirmed by ultrasound and treated via percutaneous drainage in most instances. Operative incision and drainage should be avoided as this can cause persistent wounds and fistulae.

Editor’s comments: This was an educational review based on available evidence. Recommendations provided are based on the authors interpretation of the materials re-

viewed. ■

Does High-Dose Cephalexin in Cellulitis Reduce Treatment Failure?

Take-home point: High-dose cephalexin had fewer treatment failures but also was associated with higher rates of adverse effects, which were mostly minor.

Citation: Yadav K, Eagles D, Perry J, et al. High-dose cephalexin for cellulitis: a pilot randomized controlled trial. *CJEM*. 2023 Jan;25(1):22-30.

Relevance: Cellulitis treatment failure rates approach 20% with standard antibiotic regimens.

Study summary: This was a parallel arm, double-blind randomized controlled pilot trial at the Ottawa Hospital, Canada. Adult patients presenting to the ED with nonpurulent cellulitis and determined by the treating emergency physician to be eligible for outpatient management with oral antibiotics were recruited. Participants randomized to the experimental group received a 7-day prescription of cephalexin 1000 mg four times daily, while the control group received a 7-day course of cephalexin 500 mg four times daily plus oral placebo. Patients were assessed for worsening infection criteria at day 3 and day 7 follow-up.

Thirty-three participants were randomized into each study arm. Oral antibiotic treatment failure occurred in four patients (12.9%) in the standard-dose arm vs one patient (3.2%) in the high-dose arm with similar clinical response at day 3.

A greater proportion of participants had complete clinical cure at day 7 (16.1% vs 6.5%) and day 14 (45.2% vs 38.7%) in the high-dose arm vs the standard-dose arm.

A greater percentage of participants in the high-dose arm had adverse events (38.7% vs 25.8%); these were predominantly nausea/vomiting (9.7% vs 3.2%) or diarrhea (16.1% vs 6.5%). No patients stopped their antibiotic treatment due to adverse effects.

Editor's comments: This study is limited by small size and by use of a single oral antibiotic agent. It was conducted in an ED population, which would bias to more severe cases of cellulitis. It is useful to note that clinical cure was achieved in the minority of patients by 14 days despite treatment with both standard and high-dose cephalexin. Clinicians might prepare patients for the likelihood that complete resolution of skin findings by the time of antibiotic completion may not occur and does not necessarily suggest treatment failure. ■

Parents May Feel Their Child's Pain, but Do They Understand It?

Take-home point: A considerable percentage of parents hold misconceptions about how children express pain.

Citation: Escobar-Castellanos M, Míguez-Navarro M, García-Mancebo J, et al. How much do parents know about pain in their children? *Pediatr Emerg Care*. 2023;39(1):40-44.

Relevance: Adequate analgesia is important when treating pediatric patients. However, this relies on the parent's appropriate understanding of their child's pain. It would be useful to help parents to identify and correctly treat pain in their children.

Study summary: This was a descriptive, cross-sectional, single-center survey performed in the pediatric emergency department (PED) of a tertiary referral hospital in Madrid, Spain. A two-part questionnaire was administered to parents, covering demographic variables followed by 14 questions/affirmations evaluating the parents' attitudes towards pain expression and pain management in children. To study parents' knowledge of pain expression and pain management, a previously validated survey, Parental Pain Expression Perceptions (PPEP) was used.

The authors included 453 parental questionnaires. They found around half of the answers (53.2%) were correct. Many parents had misconceptions regarding how children express pain. The most common misconceptions were that "children in pain have trouble sleeping" and "children always tell their parents when they are in pain." Parents with a higher level of education obtained 1.04 more correct answers for each level of education ($\beta=1.04$; 95% CI, 0.76–1.32; $p<0.001$).

Editor's comments: The study was based in a tertiary pediatric ED in Spain, which limits generalizability. Cultural perceptions of pain were not included in the study. Educating parents about pain evaluation and encouragement of a short duration of scheduled dosing of over-the-counter analgesics in the setting of obviously painful conditions (eg, acute fractures) may reduce oligoanalgesia in children.



COVID-19 Abstract Enduring Loss of Smell with COVID-19: Is There a Solution?

Take-home point: A combination of local corticosteroids and antihistamines had a superior effect over antihistamines alone or nasal saline for the treatment of postCOVID-19 smell dysfunction.

Citation: Mohamad S, Badawi A, El-Sabaa R, et al. Study of different local treatments of post covid-19 smell dysfunction. *Iranian J Otorhinolaryngol.* 2022;34(6), Serial No.125.

Relevance: Enduring olfactory disturbances in patients with COVID-19 are common despite recovery. Treatment options to help with these symptoms are limited.

Study summary: This was a single-center, active placebo-controlled study based in Tehran, Iran. Patients were randomly assigned to one of four parallel groups in a 1:1:1:1 ratio by computer randomization. Patients received either a combination of topical corticosteroids and antihistamine nasal spray (azelastine base/fluticasone propionate) 125 µg/50 µg/25 mL actuation nasal spray (G1), topical corticosteroids (fluticasone propionate to the nasal mucosa using a metered atomizing spray pump) (G2), antihistamine (azelastine HCl nasal spray containing 125 µg of azelastine base) one puff in each nostril twice daily (G3), or 0.2% normal saline spray (one puff in each nostril every 4h) as the control group (G4).

The primary outcome evaluated was the patients' sense of smell, which was assessed using the butanol threshold

and discrimination tests. All patients were initially evaluated after their recovery from COVID-19 and were followed for 3 weeks.

The authors enrolled 240 participants and found significant improvement in the test's scores in G1 and G2 after 3 weeks of treatment. Treatment with corticosteroids in combination with antihistamines resulted in the greatest improvement (G1), followed by steroids alone (G2), antihistamines alone (G3), and finally the saline group. These differences were statistically significant in the first and third weeks. All groups exhibited improvement in olfaction during the treatment period.

Editor's comments: The study population was comprised predominantly of male participants (84%). There was no true control group (ie, no treatment), which is current practice in most settings, so it is unclear how much recovery may have been seen without any treatment. Smell dysfunction is a particularly disconcerting symptom for many patients recovering from COVID-19 and offering nasal steroids (with or without nasal antihistamine) is a low-risk intervention that may help restore olfaction. ■



JUCM® wants YOU...

to join our award-winning* roster of esteemed authors

JUCM, The Journal of Urgent Care Medicine is known as the voice of the urgent care community, thanks to the contributions of urgent care professionals just like you.

Whether you're a physician, nurse practitioner, a physician assistant—or an owner, manager, billing and coding specialist, lawyer, or anyone else with expertise that could benefit our readers—you're qualified to submit an article.

So, if you've ever had a situation arise in your urgent care center and thought *somebody should write an article about this*, maybe you should be that "somebody." Describe it in an email to editor@jucm.com and we'll help you get started.

Our content works for the urgent care community because it comes from the urgent care community. And we aim to keep it that way.

**JUCM has garnered 17 awards in the prestigious American Society of Healthcare Publication Editors annual awards competition.*