



# ABSTRACTS IN URGENT CARE

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■ SEAN M. McNEELEY, MD

Each month the Urgent Care College of Physicians (UCCOP) provides a handful of abstracts from or related to urgent care practices or practitioners. Sean M. McNeeley, MD, leads this effort.

## Results Unavailable for 71% of Trials

**Key point:** Many research findings are not easily available to clinicians.

**Citation:** Chen Ruijun, Desai NR, Ross JS, et al. Publication and reporting of clinical trial results: cross sectional analysis across academic medical centers *BMJ*. 2016;352:i637.

Researchers investigated the amount of clinical trial findings at academic medical centers that are not published and thus not easily available to clinicians. In a cross-sectional analysis of academic medical centers, the investigators used ClinicalTrial.gov to identify all trials with a completion date between 2007 and 2010 that had a primary investigator at an academic medical center. They sought the percentage of such trials for which results were displayed that were defined as publication or as appearing within ClinicalTrial.gov, including double-blinded trials with more than 100 patients. Results were published within 24 months of trial completion for only 29% of the

trials. If more research results were available, better patient care might be possible. ■

## Intranasal Nonsteroidal Anti-inflammatory Drug Helpful in Pain Treatment

**Key point:** Another study provides an alternative to opioid analgesia.

**Citation:** Pollack CV Jr, Diercks DB, Thomas SH, et al. Patient-reported outcomes from a national, prospective, observational study of emergency department acute pain management with an intranasal nonsteroidal anti-inflammatory drug, opioids, or both. *Acad Emerg Med*. 2016; 23:331–341.

Using patient-reported outcomes from a pain-treatment study, researchers attempted to determine patient satisfaction with pain management with a nonsteroidal anti-inflammatory drug, opiate, or both, with the opiate as breakthrough therapy. The anti-inflammatory drug was nasally administered ketorolac, and in the “both” category, the opioid was clearly defined as rescue medication. Outcomes were self-reported by telephone over a 4-day period by a total of 824 patients with musculoskeletal or visceral pain. The decision about which treatment option to use was left to the health-care provider. Self-reported return to work and analgesia were higher with the ketorolac treatment than with either of the other options.



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*“Cardiac injury in older patients is a potential result of influenza infection. The study assessed data for 38,197 patients who were tested for influenza and then for myocardial infarction; 4469 had positive findings. Of those, 600 underwent biomarker testing for acute infarction within 30 days, and 143 had positive findings. Most of the diagnoses of acute coronary syndrome in those patients occurred within 3 days of an influenza diagnosis.”*

Unfortunately, this was not a randomized trial, so the accuracy of its findings might be questioned. For urgent care providers, these findings are more evidence that opioid analgesia is less effective and may hinder the effect of other treatments for patients with musculoskeletal or visceral pain. ■

### **Influenza May Predispose Older Patients to Myocardial Infarction**

**Key point:** Watch for an acute myocardial infarction after an influenza diagnosis in older patients.

**Citation:** Ludwig A, Lucero-Obusan C, Schirmer P, et al. Acute cardiac injury events  $\leq 30$  days after laboratory-confirmed influenza virus infection among U.S. veterans, 2010–2012. *BMC Cardiovasc Disord.* 2015;15:109.

Cardiac injury in older patients is a potential result of influenza infection. The authors in this study assessed data for patients in U.S. Veterans Affairs facilities who were tested for influenza and then for myocardial infarction (MI). Of 38,197 patients tested for influenza, 4469 had positive findings. Of those, 600 underwent biomarker testing for acute MI within 30 days, and 143 had positive findings. Most of the diagnoses of acute coronary syndrome (ACS) in those patients occurred within 3 days of an influenza diagnosis. Although this is a small percentage of the total infections found, it is much larger than would be expected in the general population. For the urgent care provider, these findings are a good reminder to consider MI or ACS when an older patient has influenza and other symptoms such as dyspnea or chest pain. ■

### **Teething in Toddlers Likely Does Not Cause Fever**

**Key point:** Fever in toddlers is probably not caused by teething.

**Citation:** Massignan C, Cardoso M, Porporatti AL, et al. Signs and symptoms of primary tooth eruption: a meta-analysis. *Pediatrics.* 2016;137:1–19.

Parents commonly attribute fever in their toddlers to teething. Unfortunately, this may cause parents and providers to miss serious illness or treatable minor illness. There is little evidence that teething causes fever, as defined by the medical community. This meta-analysis included more than 3500 patients younger than 3 years who were teething and noted whether they had fever or other symptoms while teething. A fever was reported in approximately 25% of the children; however, the temperature was below the medical definition of fever. The most common symptoms were gingival irritation (87%), irritability (68%), and drooling (56%). Attributing a true fever to teething is probably ill advised. Making sure that parents understand this can prevent delayed diagnosis in some children. ■

### **Trimethoprim-Sulfamethoxazole Associated with Better Cure Rate for Abscesses**

**Key point:** Consider adding trimethoprim-sulfamethoxazole in treating abscesses.

**Citation:** Talan DA, Mower WR, Krishnadasan A, et al. Trimethoprim-sulfamethoxazole versus placebo for uncomplicated skin abscess. *N Engl J Med.* 2016;374:823–832.

In general, the treatment of abscesses with properly done incision and drainage works well without the use of antibiotics. Past studies have not shown any benefit from administering additional antibiotics. This study was conducted to determine whether trimethoprim-sulfamethoxazole (TMP-SMX) benefits patients with abscesses. The authors believed that because of the significant cure rate for just incision and drainage, previous studies were too underpowered to prove a difference between such treatment and treatment with the addition of antibiotics. In this double-blind study, 1247 patients aged 12 years or older with abscesses were treated in one of five U.S. emergency departments with standard incision and drainage and then either TMP-SMX or placebo for 7 days. The primary outcome tracked was clinical cure of the abscess by 1 to 2 weeks after treatment. The cure rate was significantly better in patients treated with antibiotics than in those who did not receive them (80.5% vs. 73.6%). Antibiotic-treated patients also had less need for further intervention, lower rates of infection at other sites, and lower rates of subsequent infection in household members.

For the urgent care provider, these results are difficult to act on. Although the improvement rate is statistically significant, it is still a small percentage of all of the previously mentioned

outcomes. The risk of treatment with sulfa drugs is well documented. Perhaps it makes sense to use TMP-SMX for patients with other risks like diabetes mellitus or those who are immunocompromised or have immunocompromised family members. Providers should definitely discuss with patients the risks and benefits of treatment with TMP-SMX. ■

### Food and Drug Administration Recommends Avoiding Codeine in Children

**Key point:** *There are new recommendations to stop using codeine in children.*

**Citation:** Codeine cough-and-cold medicines in children: Drug Safety Communication—FDA evaluating potential risk of serious side effects. Silver Spring, MD: U.S. Food and Drug Administration [updated 2015 July 1; cited 2016 March 10]. Available from: <http://www.fda.gov/Safety/MedWatch/SafetyInformation/SafetyAlertsforHumanMedicalProducts/ucm453379.htm>

Several authorities have discussed the use of codeine products in children, and little evidence has shown that codeine is any better than ibuprofen for pain. Recently an advisory panel of the U.S. Food and Drug Administration recommended against the use of codeine for pain or cough in children. In Europe, it is considered contraindicated in children aged 12 years and younger. Codeine is metabolized to morphine, but in many children the rate of metabolism is unpredictable. Those who metabolize it more quickly are susceptible to greater adverse effects, and those who metabolize it more slowly may benefit less from it. In the urgent care setting, avoiding the use of codeine in this age group is probably best. It may be helpful to discuss with parents the warnings from the Food and Drug Administration and from European agencies and to point out the drug's inferior performance in multiple studies. ■

### Prednisolone and Indomethacin Equally as Good in Treating Gout

**Key point:** *Prednisolone and indomethacin may have similar analgesic results in the treatment of gout.*

**Citation:** Rainer TH, Cheng CH, Janssens HJ, et al. Oral prednisolone in the treatment of acute gout: a pragmatic, multicenter, double-blind, randomized trial. *Ann Intern Med.* 2016 February 23. doi: 10.7326/M14-2070. [Epub ahead of print.]

The authors of this report note that several small studies have shown an equivalence between prednisolone and indomethacin in treating the symptoms of gout. For certain patients, each treatment presents its own benefits and risks. Knowing whether the two drugs are equivalent excludes one concern when deciding on appropriate treatment for an individual patient. In this double-blind multicenter, randomized, con-

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trolled trial from Hong Kong, 376 patients were evaluated for pain. On the basis of pain scores on a visual analog scale, the authors concluded that both medications had a similar effect on pain control. They do note that the diagnosis of gout was on clinical grounds, not on findings from joint aspiration, but this is the most common method for diagnosis at urgent care centers anyway. Thus, oral prednisolone and indomethacin may both be good choices for a patient presenting with gout. ■

### More Evidence That Trimethoprim-Sulfamethoxazole Is Most Effective in Treating Methicillin-Resistant *Staphylococcus aureus*

**Key point:** *Methicillin resistance in *Staphylococcus aureus* infections is decreasing in children.*

**Citation:** Sutter DE, Milburn E, Chukwuma U, et al. Changing susceptibility of *Staphylococcus aureus* in a US pediatric population. *Pediatrics.* 2016 Mar 1. pii: peds.2015-3099. [Epub ahead of print.]

Over time, the percentage of methicillin-resistant *Staphylococcus aureus* (MRSA) infections has actually decreased. Data for children have not been available from larger studies to determine the trend, but between 2005 and 2014, researchers in this study retrospectively analyzed 39,000 patients at U.S. military hospitals with at least one sample with positive findings for *Staphylococcus*. Most of the samples were from ambulatory patients with skin and soft-tissue infections. The highest rates of MRSA infections were seen in children younger than age 5 years. They found that as with adults, the rates of MRSA infections have been decreasing, although regional patterns are still an issue. Interestingly, clindamycin resistance is increasing in only those *Staphylococcus* infections with methicillin resistance, moving from 10% to 17%. Trimethoprim-sulfamethoxazole once again proved most effective in treating MRSA infections. For the urgent care provider, this information may be helpful in choosing treatment regimens. As always, knowing local resistance patterns is very important. ■