



# ABSTRACTS IN URGENT CARE

- Azithromycin Versus Doxycycline for Chlamydia
- Do CT Scans Make Lumbar Puncture Unnecessary in Sudden-Onset Headache?
- Taking Vitamin D May Cut Migraine Rate
- Lurking MRSA May Cause Recurrent Infections
- Stopping Nausea with Nasal Isopropyl Alcohol?
- Eosinophilia with Long-Term Use of Antibiotics
- Anakinra for Hidradenitis Suppurativa
- Assessing Which Patients with Likely Acute Coronary Syndrome Can Go Home

■ 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 McNeeley, MD, leads this effort.

## Azithromycin Versus Doxycycline for Chlamydia

*Key point: Azithromycin is a little less effective than doxycycline for chlamydia.*

Citation: Geisler WM, Uniyal A, Lee JY, et al. Azithromycin versus doxycycline for urogenital *Chlamydia trachomatis* infection. *N Engl J Med.* 2015;373:2512–2521.

This study of a population in a youth correctional facility compared the effectiveness of azithromycin with doxycycline in the treatment of chlamydia. A total of 567 participants were randomized to regimens of azithromycin or doxycycline after diagnosis of chlamydia, recommended by the Centers for Disease Control and Prevention. After 28 days a test of cure was performed. Patients were watched closely to eliminate chance in contracting the disease again. The cure rate of azithromycin was 97%, whereas it was 100% for doxycycline. Although those findings are not definitive, the study does provide good information. Acute-care providers should balance the ease of treat-

ment (one dose with azithromycin) with cure rates and also let patients know that the easier treatment may fail. ■

## Do CT Scans Make Lumbar Puncture Unnecessary in Sudden-Onset Headache?

*Key point: Can lumbar puncture be skipped in evaluation of subarachnoid hemorrhage?*

Citation: Blok KM, Rinkel GJ, Majoie CB, et al. CT within 6 hours of headache onset to rule out subarachnoid hemorrhage in nonacademic hospitals. *Neurology.* 2015;84:1927–1932.

Two previous studies revealed a negative predictive value of almost 100% for third-generation computed tomography scans read by university-based radiologists for patients considered at risk of subarachnoid hemorrhage. This study considered findings for scans done with third-generation scanners and read at community facilities within 6 hours of onset of symptoms. A total of 760 patients were scanned. In only 1 of the patients was a mild subarachnoid hemorrhage missed, for a negative predictive value of 99.9%. Although this is not a frequent diagnosis made during urgent care visits, the process at emergency departments after patients with sudden-onset headaches leave urgent care centers may soon be changing: The researchers concluded that lumbar puncture can be avoided in patients who undergo computed tomography scans within 6 hours of headache onset. Being aware of the potential change and not creating fear of a



**Sean M. McNeeley, MD**, is an urgent care practitioner and Network Medical Director at University Hospitals of Cleveland, home of the first fellowship in urgent care medicine. Dr. McNeeley is a board member of UCAOA, UCCOP, and the Board of Certification in Urgent Care Medicine. He also sits on the *JUCM* editorial board.

need for lumbar puncture will likely benefit conversations with patients with sudden-onset headaches. [Editor's note: For more on subarachnoid hemorrhage, see the case report "Sudden-Onset Severe Headache" in our January 2016 issue, at [www.jucm.com/sudden-onset-severe-headache/](http://www.jucm.com/sudden-onset-severe-headache/).] ■

### Taking Vitamin D May Cut Migraine Rate

**Key point:** Consider adding vitamin D to reduce migraine frequency.

**Citation:** Buettner C, Nir RR, Bertisch SM, et al. Simvastatin and vitamin D for migraine prevention: a randomized controlled trial. *Ann Neurol.* 2015;78:970–981.

Patients with migraine frequently seek care in the urgent care setting. According to the authors of this randomized, placebo-controlled study, migraines are the 8th most frequent cause of disability worldwide. They investigated the use of vitamin D plus simvastatin for migraine prevention. Approximately 60 patients were monitored for 12 weeks to determine migraine frequency, and then treated either with simvastatin and vitamin D or with matching placebo tablets and capsules. Patients in the treatment group had a mean of 8 fewer days of migraine, whereas those in the placebo group actually experienced 1 additional day of migraine. Although this was a small study and should be replicated, its findings may provide some insight into another way to reduce migraines. It is unlikely that an acute-care provider would add simvastatin to a treatment plan for patients with migraine, but for those patients already taking it, the addition of vitamin D, 1000 IU twice daily, might reduce migraine frequency. ■

### Lurking MRSA May Cause Recurrent Infections

**Key point:** Methicillin-resistant *Staphylococcus aureus* hiding in cells may cause recurrent infections.

**Citation:** Lehar SM, Pillow T, Xu Min, et al. Novel antibody-antibiotic conjugate eliminates intracellular *S. aureus*. *Nature.* 2015;527:323–328.

This study investigated the possibility of an intracellular reservoir of methicillin-resistant *Staphylococcus aureus* (MRSA) that may be susceptible to an antibody-based cure at least in mice. The authors speculated that this may be the cause of recurrent infections or even treatment failures. Although the findings are not well validated enough to change treatment, they do suggest a potential etiology for MRSA recurrence. The authors created an antibiotic bound to an antibody that would not enter mammalian cells until cleaved by a cell infected by MRSA. The antibiotic used was closely related to rifampicin. This may eventually provide a way to treat patients frustrated by multiple episodes of infection. ■

### Stopping Nausea with Nasal Isopropyl Alcohol?

**Key point:** Isopropyl alcohol may reduce nausea.

**Citation:** Beadle KL, Helbling AR, Love SL, et al. Isopropyl alcohol nasal inhalation for nausea in the emergency department: a randomized controlled trial. *Ann Emerg Med.* 2015 Nov 21. pii: S0196-0644(15)01361-X. doi: 10.1016/j.annemergmed.2015.09.031.

Nausea and emesis are frequent issues in urgent care centers. Many newer treatments are usually effective at helping, but patient factors occasionally limit their use. In this double-blind, placebo-controlled trial, 80 patients with nausea or emesis were treated with either nasal isopropyl alcohol or saline, and nausea scores were assessed at 10 minutes after treatment. Those in the treatment group averaged a score of 3 on an 11-point verbal numeric response scale, whereas those in the saline group averaged a score of 6. Although the sample size was small, these are interesting findings. For the acute-care provider, this is information to file in the if-all-else-fails category of treatments. ■

### Eosinophilia with Long-Term Use of Antibiotics

**Key point:** Eosinophilia is more common with the long-term use of antibiotics than previously thought.

**Citation:** Blumenthal KG, Youngster I, Rabideau DJ, et al. Peripheral blood eosinophilia and hypersensitivity reactions among patients receiving outpatient parenteral antibiotics. *J Allergy Clin Immunol.* 2015;136:1288–1294.

It is known that eosinophilia after long-term use of antibiotics is possible, but there is little data on how common it is. Because eosinophilia may portend other allergic consequences, the researchers looked at the incidence of this phenomenon. A total of 826 former inpatients who had a normal eosinophil count before treatment were evaluated. Of these, 210 developed eosinophilia. These patients were also four times as likely to have a rash and twice as likely to have renal injury. Although this population is not a direct parallel to most urgent care patients, the median course of the condition was just over a month. Occasionally, with multiple treatments, acute-care patients could develop longer courses. This should raise concerns for milder allergic reactions and the potential of long-term damage by antibiotics. ■

### Anakinra for Hidradenitis Suppurativa

**Key point:** A recombinant human interleukin-1 receptor antagonist may be a treatment for severe hidradenitis suppurativa.

**Citation:** Tzanetakou V, Kanni T, Giatrakou S, et al. Safety and efficacy of anakinra in severe hidradenitis suppurativa: a randomized clinical trial. *JAMA Dermatol.* 2016;152:52–59.

*"The addition of vitamin D, 1000 IU twice daily, might reduce migraine frequency."*

Severe hidradenitis suppurativa (HS) is a challenging disease that frequently brings patients to urgent care centers for incision and drainage as well as advice for prevention. Few options for treatment are available. In a small trial in Greece, a total of 20 patients were randomized to treatment with either anakinra (a recombinant human interleukin-1 receptor antagonist) or placebo for severe HS. Improvement was noted in 20% of the placebo group and in 67% of the treatment group. Obviously a biologic therapy such as anakinra would not be started in an urgent care setting, but acute-care providers may want to provide information about this study to patients who must cope with the disease. ■

**Assessing Which Patients with Likely Acute Coronary Syndrome Can Go Home**

*Key point: Using risk scores and troponin to determine whether to discharge patients with potential acute coronary syndrome can be complicated.*

Citation: Carlton EW, Khattab A, Greaves K. Identifying patients suitable for discharge after a single-presentation high-sensitivity troponin result: a comparison of five established risk scores and two high-sensitivity assays. *Ann Emerg Med.* 2015;66:635–645.

Millions of patients are evaluated every year for symptoms of potential acute coronary syndrome. Finding a way to determine whether their risk is low enough for them to be able to go home can be difficult. This study evaluated clinical risk scores and troponin assay findings to see if a single troponin test can be used to obtain a negative predictive value of 99.5% while still sending 30% of patients home. The following prediction scores were used: modified Goldman; Thrombolysis in Myocardial Infarction (TIMI); Global Registry of Acute Cardiac Events (GRACE); History, ECG [electrocardiograph], Age, Risk Factors, Troponin (HEART); and Vancouver Chest Pain Rule. Troponin I (867 patients) and high-sensitivity troponin T (959 patients) were used for evaluation. Patients with suspected acute coronary syndrome and benign electrocardiographic findings were evaluated by risk score and troponin. Results were very complex. According to the authors, a TIMI score of 0 or  $\leq 1$  and a modified Goldman score  $\leq 1$  with high-sensitivity troponin T, and a TIMI score of 0 and a HEART score of  $\leq 3$  with high-sensitivity troponin I had the potential to achieve a negative predictive value  $\geq 99.5\%$  while identifying  $>30\%$  of patients as suitable for immediate discharge. For the urgent care provider, this provides some hope for rapid assessment but also underscores the importance of understanding the risk scores and knowing which troponin assay is in use. ■

**How JUCM's Editorial Process Helps Our Authors**

Our authors do the hardest part of publication, researching and writing articles to add to the urgent care literature. Then once we have assessed the big-picture issues during peer review, we polish the manuscripts until they shine, through a process called copyediting. Here is a partial list of the issues that our editors address during copyediting:

- Grammar
- Punctuation
- Spelling
- Syntax
- Good transition from one topic to another
- Overall topic organization
- Logic
- Accessibility:
  - o Did the author present enough information so that readers with various levels of expertise—longtime physician, nurse-practitioner, intern, medical student—can understand what is meant, or are there information gaps that should be explicitly addressed?
  - o Even though a specific abbreviation is already defined in the text, is it also defined in the caption for the figure where it is used, so that skimming readers don't have to search the entire article to find out what the figure's abbreviation means?
- Consistency (e.g., did the authors use an abbreviation throughout, or did they use the full term sometimes and the abbreviation at other times?)
  - Topic, figure, and table cross-references in text
  - Verification of names of drugs, genera and species, and actual people, places, and organizations
  - Appropriate citation of references
  - Wordiness (getting rid of it)
  - Jargon (making sure jargon is used appropriately—or whether it needs to be used at all)
- Bias-free writing:
  - o Sex
  - o Gender identification
  - o Parents versus nonparents when discussing pediatric patients
  - o Emotions (e.g., in research papers, using "killed the rats" instead of the emotion-laden "sacrificed the rats")
- Style:
  - o Uppercase versus lowercase
  - o Standardizing references to follow American Medical Association style
  - o Trademarks versus generic names
- Presentation (What works best for reader comprehension here: straight text, a bulleted list versus a numbered list, a sidebar, a table, a figure?)
  - Meta-issues (e.g., can we add an editorial comment referring readers to another article in the same issue or in a past issue on a topic related to the one covered in an article in our current issue?)

It takes time for our editors to address all of these issues in helping you make your writing its very best, so please be patient. We're on your side.

