ABSTRACTS IN URGENT CARE

- Who's Getting Antibiotics for Nonbacterial URIs?
- Constipated Children in the ED
- Reconsidering Knee Injections
- Chondroitin vs Celecoxib and Placebo for Knee Pain
- Protecting Traveling Patients from MMR
- Can ECGs Suggest PEs?
- Steroid Use in Treating Sore Throat
- Looking at Appropriate Steroid Use in Children with Asthma
- Chest Pain with No Diagnosis

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Each month the College of Urgent Care Medicine (CUCM) provides a handful of abstracts from or related to urgent care practices or practitioners. Sean M. McNeeley, MD and Glenn Harnett, MD lead this effort.

Tracking Antibiotic Prescriptions for Nonbacterial Acute URI

Key point: Patients were more likely to receive prescriptions from mid- or late-career physicians and from those with higher daily patient volumes.

Citation: Silverman M, et al. Antibiotic prescribing for nonbacterial acute respiratory infections in elderly persons. *Ann Intern Med*. [Epub ahead of print May 9, 2017]

This retrospective analysis of linked administrative health care data was drawn from 8,990 primary care physicians and 185,014 patients who presented with a nonbacterial acute upper respiratory infection (AURI). The study was designed to determine the prevalence of antibiotic prescribing for nonbacterial AURIs and whether prescribing rates varied depending on various physician characteristics. These nonbacterial infections included the common cold (53.4%), acute bronchitis (31.3%), acute sinusitis (13.6%), or acute laryngitis (1.6%). Forty-six percent of patients with a nonbacterial AURI received an antibiotic prescription, with most prescriptions written for broad-spectrum agents (69.9%). The high rate of broad-spectrum antibiotic prescribing in this low-risk cohort is strongly suggestive of inappropriate prescribing. In addition to concerns about antimicrobial resistance and *Clostridium difficile* infection from antibiotic overprescribing, the toxicity of these drugs needs to be considered, particularly in light of recent warnings issued by the U.S. Food and Drug Administration for macrolides (cardiac arrhythmias and drug interactions) and quinolones (tendinitis, central and peripheral nervous system toxicity). Patients were more likely to receive prescriptions from midcareer (11-24 years since graduation) or late-career physicians (>25 years since graduation) and from physicians with higher patient volumes (>25 patients seen per day). It would be interesting to see further studies in the urgent care setting to explore whether the rate of inappropriate antibiotic prescriptions also rises with higher daily patient volumes. ■

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Repeat ED Visits for Children with Constipation

Key point: Reconsider that abdominal radiograph in kids.

Citation: Freedman SB, et al. Delayed diagnoses in children with constipation: Multicenter retrospective cohort study. *J Pediatr*. April 28, 2017. [Epub ahead of print]

This study looked at pediatric patients from 2004 to 2015 who were diagnosed with constipation and had an abdominal film series performed. The endpoint evaluated was a repeat visit to the emergency room for a significant problem. A total of 282,000 visits with a diagnosis of constipation were reviewed. Sixty-five percent had abdominal films performed. Of these, 3.7% had a 3-day revisit, with 0.28% being clinically significant. The most common alternate diagnosis was appendicitis. This was found in about one third of patients. Compared with patients who did not have a radiograph, those who did were

about twice as likely to have a clinically important alternative diagnosis. For the urgent care provider, the decision to perform an abdominal radiograph is tempting; however, the current recommendation is to avoid them, as they are rarely helpful and as seen in this emergency department based study can be falsely reassuring. ■

Triamcinolone vs Saline for Symptomatic Knee Osteoarthritis

Key point: Reconsider the knee injection.

Citation: McAlindon TE, et al. Effect of intraarticular triamcinolone vs saline on knee cartilage volume and pain in patients with knee osteoarthritis: a randomized clinical trial. *JAMA*. 2017;317(19):1967-1975.

This 2-year, randomized, placebo-controlled, double-blind trial compared intraarticular triamcinolone vs saline for symptomatic knee osteoarthritis with ultrasonic features of synovitis in 140 patients to determine its effects on progression of cartilage loss and knee pain. There was no significant difference on knee pain severity between treatment groups, and triamcinolone treatment resulted in greater cartilage volume loss.

"Urgent care physicians should use caution when considering long-term intraarticular steroid injections."

These results showed greater progression of knee cartilage volume loss and no sustained effect on intraarticular inflammation as indicated by persistence of effusion. As a proof-of-concept study, the results raise questions about the role of inflammation in osteoarthritis progression. The rate of cartilage loss in this study was commensurate with that observed in prior natural history studies, so it is likely that the difference in cartilage loss rates between groups was due to an adverse effect of intraarticular corticosteroids on cartilage rather than a benefit from intraarticular saline. Urgent care physicians should use caution when considering long-term intraarticular steroid injections for chronic knee pain associated with osteoarthritis. ■

Chondroitin vs Celecoxib vs Placebo in Knee Pain

Key point: Consider pharmaceutical-grade chondroitin.

Citation: Reginster JY, et al. Pharmaceutical-grade chondroitin sulfate is as effective as celecoxib and superior to placebo in symptomatic knee osteoarthritis: the ChONdroitin versus CElecoxib versus Placebo Trial (CONCEPT). *Ann Rheum Dis*. May 22, 2017. [Epub ahead of print]

This study compared 800 mg of pharmaceutical-grade chondroitin, celecoxib 200 mg and placebo in treatment of knee pain. This three-arm study was double blind and placebo controlled, including over 600 patients. Pain was assessed by a visual analogue scale. The chondroitin was significantly superior to placebo, although placebo had a definite effect on pain. Chondroitin was not inferior to celecoxib. For the urgent care provider, this somewhat small study does suggest that using chondroitin as a first-line treatment may be a good choice. The magnitude of the effect of placebo was also an interesting finding. ■

Ensuring Travelers Are Up to Date with MMR Vaccine

Key point: Don't miss the chance to update MMR for travelers.

Citation: Hyle EP, et al. Missed opportunities for measles, mumps, rubella vaccination among departing U.S. adult travelers receiving pretravel health consultations. *Ann Intern Med*. May 16, 2017. [Epub ahead of print]

This article looks at decisions to provide MMR vaccine to travelers out of the country. The authors note many of the MMR outbreaks in the U.S. are resultant from *returning* travelers. The information was obtained through a survey of travelers. Over 40,000 travelers were included in the survey. Sixteen percent of these travelers were eligible for an MMR vaccine. Of those eligible for the MMR vaccine, 53% were not vaccinated. Reasons for no vaccine included refusal by patient (48%), provider decision (28%), and health system barriers (28%). Southern states and nonacademic centers tended to have a lower rate of immunizations. For the urgent care provider, this serves as a reminder to encourage MMR vaccination in travelers, as well as something to keep in mind when evaluating patients with possible measles, mumps, or rubella. A travel history of the patient and possible contacts remains important. ■

'Normal' ECGs Do Not Rule Out Possible Pathologies

Key point: EKG may suggest PE

Citation: Co I, et al. New electrocardiographic changes in patients diagnosed with pulmonary embolism. *J Emerg Med*. 2017;52(3):280-285.

Previous studies have evaluated ECG patterns predictive of pulmonary embolism (PE) at the time of PE diagnosis, though none have examined ECG changes in these patients when compared with their previous ECGs. This study's objective was to identify the most common ECG changes in patients with known PE when their ECGs were compared with their previous baseline ECGs. ECGs have poor sensitivity and specificity for diagnosing PE, and its main value in the urgent care setting is its ability to identify other potentially life-threatening diagnoses, such as myocardial ischemia or infarction and pericarditis. The most common ECG changes when compared with previous ECG in the setting of PE were T-wave inversion and flattening, most commonly in the inferior leads, which occurred in approximately one-third of cases. Approximately one-quarter of patients will have a new sinus tachycardia, and approximately one-quarter will have no change in their ECG. This study is useful for urgent care physicians, as the ECG changes noted in this study are not the traditional changes taught in medical school (eg, right axis deviation, Q waves in Lead I, and inverted T waves in Lead III). The authors also make an important point: much like in the setting of acute coronary syndrome and acute myocardial infarction, a normal ECG does not rule out the potential for severe pathology. ■

Consider Your Options Before Prescribing Steroids for Sore Throat

Key point: Steroids Are of Little Benefit in Sore Throat

Citation: Hayward GN, et al. Effect of oral dexamethasone without immediate antibiotics vs placebo on acute sore throat in adults: a randomized clinical trial. *JAMA*. 2017;317 (15):1535-1543.

In this placebo-controlled, randomized, double-blind trial the use of steroids in the form of a single dexamethasone dose was compared with placebo for patients with sore throat who were not in need of antibiotics. A total of 565 patients were eligible for the study. Of these, 288 received dexamethasone 10 mg. Symptoms were similar at 24 hours and slightly better for the patients in the treatment group at 48 hours (35% vs 27%). The authors labeled this is a significant difference. From the perspective of an urgent care provider, and considering the other studies reviewed in this abstract section, an 8% improvement in symptom resolution does not seem to be worth the risk of steroids. At the minimum, a thorough discussion of risks and benefits should be undertaken if the decision is made to prescribe steroids. ■

Prescribe Steroids Judiciously

Key point: Another steroid use question, but an indirect study.

Citation: Farber HJ, et al. Oral corticosteroid prescribing for children with asthma in a Medicaid managed care program. *Pediatrics*. 2017;139(5):e20164146.

"Patients with 'other' diagnoses or no diagnosis 6 months later have an incidence of 3% to 5% of cardiac events within a 5-year period."

This study attempts to determine appropriateness of oral steroid treatment for patients with asthma. Claims data from Texas Children's Health Plan was reviewed for steroid use and other signs, such as poorly controlled asthma, inhaler use, emergency room visits, or hospitalizations. Based on their review, significant steroid overuse may be present. They divided use into four groups; despite differences in use, outcomes were likely similar. Unfortunately, the data used in this study were not a direct chart review but rather assumptions based on claims data. From the acute care provider's perspective, the only definite message is to be aware that there is a concern for overprescription and, understanding all treatment has risk, be sure to prescribe judiciously. ■

The Challenge of Chest Pain with No Diagnosis

Key point: Those undiagnosed may be latent cardiac disease.

Citation: Jordan KP, et al. Prognosis of undiagnosed chest pain: linked electronic health record cohort study. *BMJ*. 2017;357:j1194.

Despite significant testing, a small percentage of patients with chest pain do not get a specific diagnosis as much as 6 months later. This study looks at this population of patients over time to seek future diagnoses. This study included 172,180 patients from 233 general practices over a 7-year period. The endpoints included fatal or nonfatal cardiovascular events over 5 years of follow-up. The cardiovascular rate was higher for those with unattributed symptoms than those with a noncardiac cause (4.7% vs 3%). For the urgent care provider, this is a good reminder that both those with other diagnoses and those without a diagnosis related to their pain 6 months later still have an incidence of 3% to 5% of cardiac events within a 5-year period. It does not help answer whether the patient with no definitive diagnosis in the urgent care has a cardiac problem, but it reminds us that even another diagnosis does not definitively rule out cardiac disease. ■