



ABSTRACTS IN URGENT CARE

- Vitamin D to Prevent URIs?
- Managing Febrile Babies <3 Months of Age
- New Syncope Guidelines from ACC/AHA/HRS
- Pre-Procedure Antibiotics for Dental Patients with Ortho Implants
- Consider *C diff* in Patients with Unexplained Diarrhea
- Antibiotics-Only vs Appendectomy in Peds with Appendicitis
- Ads Drive Prescription Requests, for Better or Worse

■ SEAN M. McNEELEY, MD and GLENN HARNETT, 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 and Glenn Harnett, MD lead this effort.

Consider Vitamin D Supplementation for Patients Prone to URIs

Key point: *Vitamin D supplementation was both safe and protective against acute respiratory tract infection.*

Citation: Martineau AR, Jolliffe DA, Hooper RL, et al. Vitamin D supplementation to prevent acute respiratory tract infections: systematic review and meta-analysis of individual participant data. *BMJ*. 2017;356:i6583.

An ounce of prevention would definitely be a good idea when it comes to upper respiratory infection. With the currently limited treatments for the common cold, a chance to prevent them could only benefit patients. This systematic review and meta-analysis of double-blind randomized studies considered 25 trials, including a total of 11,321 participants age 0 to 95 years, considered whether vitamin D supplementation reduced the risk of URI, as well as safety of supplementation. No increased risk of adverse events was noted. Risk of URI decreased overall (odds ratio 0.88 was noted). In those patients with low vitamin D, the odds ratio was even lower at 0.81. For the acute care provider, this at least offers a suggestion for the patient not in

need of antibiotics, but wanting something concrete for their copay. ■

Is the Classical Path Always Needed for Febrile Infants <3 Months Old?

Key point: *Outpatient management without antibiotics or lumbar puncture is appropriate for selected febrile infants <3 months of age who have close follow-up.*

Citation: Mintegi S, Gomez B, Martinez-Virumbrales L, et al. Outpatient management of selected young febrile infants without antibiotics. *Arch Dis Child*. 2017 Mar; 102(3):244-249.

Despite numerous studies showing the vast majority of children in the 21–90-days-old age group presenting with fever without a source (FWS) have a benign viral disease, a complete septic workup to include lumbar puncture, blood cultures, IV antibiotics, and hospital admission for at least 48 hours has been the classically recommended treatment path for this patient population. This path may lead to unnecessary hospitalizations, nosocomial infections, nonjudicious use of antibiotics, emergence of resistant bacteria, and serious adverse effects of antibiotics. This prospective cohort study investigated patients between 21 and 90 days old who presented to an emergency department (ED) with FWS. Patients were classified as either low or high risk for serious bacterial infection (SBI). Low risk was defined as well appearing, age >21 days, no leukocyturia, absolute neutrophil count <10 000, CRP <20 mg/L, procalcitonin <0.5 ng/mL, and no clinical deterioration during their stay in the ED. All told, 586 patients



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“The new guidelines offer urgent care clinicians a chance to learn the latest evidence-based treatment of patients with syncope.”

at low risk for SBI were managed without a lumbar puncture and treated as outpatients without antibiotics. Only two patients were subsequently diagnosed with SBI; neither had an adverse outcome. The results indicate that in carefully selected infants with FWS, outpatient management without antibiotics and lumbar puncture is appropriate. ■

New Guidelines on Patients with Syncope

Key point: *The differential diagnosis of the cause of syncope is extremely broad and may involve multiple organ systems, comorbid conditions, and diverse histories.*

Citation: Shen WK, Sheldon RS, Benditt DG, et al. 2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients with Syncope: Executive Summary. *J Am Coll Cardiol.* 2017 March 9 [Epub ahead of print].

These ACC/AHA/HRS guidelines on the evaluation and management of syncope are quite extensive, with the Executive Summary itself weighing in at 231 pages. The document provides guidance and recommendations on the evaluation and management of patients with suspected syncope in the context of many different clinical settings, causes, and selected circumstances. Particular emphasis was placed on the need to consider the numerous potential sources of syncope, including cardiac arrhythmias, ischemic heart disease, structural heart disease (including CHF, cardiomyopathy and valvular causes), neurogenic causes, orthostasis, reflex conditions, metabolic causes, and many others. Detailed guidance is also applied to age, lifestyle, comorbid conditions, and specific populations. The guidelines include recommendations and algorithms on the essential diagnostic work-up required, suggested consultations, treatment, and disposition of the diverse population of patients who present with syncope. Level 1 recommendations for all patients include a detailed history and physical examination, a resting 12-lead ECG, risk assessment, and admission for all patients with syncope who have a potentially serious medical condition relevant to the cause of their syncope. Those conditions include cardiac arrhythmias, patients with pacemaker/ICDs, cardiac ischemia, cerebrovascular accidents, valvular or structural cardiac abnormalities, severe anemia or GI bleeding, and persistent vital sign abnormalities, among many others. These guidelines represent

an excellent opportunity for urgent care clinicians to become aware of the latest evidence-based treatment of patients who present with syncope. ■

Rethinking Antibiotics Before Dental Procedures for Patients with Orthopedic Implants

Key point: *Patients with orthopedic implants rarely need antibiotic prophylaxis for dental procedures unless they meet multiple specific criteria.*

Citation: Quinn RH, Murray JN, Pezold R, et al. The American Academy of Orthopaedic Surgeons appropriate use criteria for the management of patients with orthopaedic implants undergoing dental procedures. *J Bone Joint Surg Am.* 2017;99(2):161-163.

Systemic antibiotic prophylaxis for orthopedic implant patients undergoing dental procedures has been standard practice for the last three decades. This is despite previous evidence that shows the chance of oral bacteremia being related to prosthetic joint infections is extremely low. Much like during dental procedures, oral bacteremia frequently occurs secondary to normal activities of daily living such as brushing teeth, and eating. These *Appropriate Use Criteria* from the American Academy of Orthopaedic Surgeons were created by an expert panel of dentists, orthopedic surgeons, and infectious disease physicians after a comprehensive literature review. The five main criteria used to determine the necessity of antibiotic prophylaxis included whether the dental procedure manipulated the gingiva, periapical space, or oral mucosa; whether the patient had a previous history of prosthetic infection; time since implant <1 year; an immunocompromised state; and current poor glycemic control in diabetics. The expert panel reviewed 64 different patient scenarios involving a combination of the above criteria and only voted to strongly recommend antibiotic prophylaxis in eight of those scenarios. Each of those scenarios involved patients who met at least four out of five of the main criteria. Antibiotic choices recommended included ampicillin, ceftriaxone, cephalexin, azithromycin, or clarithromycin. The article also includes a link to a clinical decision app in which a clinician can enter their patient's data and instantly receive a recommendation regarding the use of prophylactic antibiotics in that patient. ■

Diarrhea Due to C diff Is on the Rise

Key point: *Think C diff with isolated diarrhea.*

Citation: Abrahamian FM, Talan DA, Krishnadasan A, et al. *Clostridium difficile* infection among U.S. emergency department patients with diarrhea and no vomiting. *Ann Emerg Med.* 2017. February 24. [Epub ahead of print]

ABSTRACTS

Think about C diff when isolated diarrhea is present, even if no risk factors are identified.

The incidence of diarrhea caused by *Clostridium difficile* has been on the rise. This prospective study of 10 emergency departments looked at patients >2 years of age with more than three episodes of diarrhea over 24 hours and no emesis to determine the incidence of C diff. A total of 422 patients with a mean duration of 3 days of diarrhea were evaluated. At least one risk factor was present for 41%. A total of 43 patients (10%) were identified as infected. Of those infected, 39.5% had no identified risk factor. For the urgent care provider, this is a good reminder to think about C diff when isolated diarrhea is present, even if no risk factors are identified. ■

Antibiotics-Only vs Appendectomy in Young Patients with Uncomplicated Appendicitis

Key point: Surgical intervention may be avoidable in pediatric patients with uncomplicated appendicitis.

Citation: Huang L, Yin Y, Yang L, et al. Comparison of antibiotic therapy and appendectomy for acute uncomplicated appendicitis in children: a meta-analysis. *JAMA Pediatr.* 2017 March 27. [Epub ahead of print]

This meta-analysis of recent clinical trials comparing antibiotic therapy-only vs appendectomy in pediatric patients with uncomplicated appendicitis suggests that antibiotics-only as the initial treatment may

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“We need better studies to evaluate DTCA risks and benefits.”

be a feasible and effective option without increasing the risk for complications. Uncomplicated appendicitis refers to those infections where the inflamed appendix remains intact, as opposed to complicated appendicitis which includes the development of a perforation, abscess, mass, or gangrene. Nonoperative, antibiotic-only treatment was effective in 90.5% of patients reviewed in this analysis. However, the failure rate in antibiotic-only treatment was higher compared with initial appendectomy, especially in cases where an appendicolith was present. Surgery remains the suggested treatment option for pediatric patients with either complicated appendicitis or uncomplicated appendicitis associated with an appendicolith, while antibiotic-only treatment may be appropriate for uncomplicated appendicitis *not* associated with an appendicolith. The authors suggest the need for further RCTs involving antibiotic-only treatment for uncomplicated appendicitis in the pediatric population. ■

How ‘Good’ Are Good DTC Ads, Really?

Key point: Ads are having their intended effect—but is this good or bad?

Citation: Layton JB, Kim Y, Alexander GC, Emery SL. Association between direct-to-consumer advertising and testosterone testing and initiation in the United States, 2009-2013. *JAMA*. 2017;317(11):1159-1166.

If you watched any television recently, you will have seen direct-to-consumer ads for prescription medications. Despite the frightening list of side effects, patients continue to contact physicians about prescribing these medications. This study looks at the relationship of prescriptions for testosterone and direct-to-consumer advertising (DTCA) for testosterone, considering the Nielsen ratings of DTCA and rate of prescriptions for testosterone. Three outcomes were studied: rate of testosterone testing, initiation of medication, and initiation of medication without recent testing. All three outcomes were increased. However, the absolute numbers were small compared with the number of ads seen monthly. Because this was not individual data, this study did not specifically answer study questions of whether the ads increased appropriate testing and initiation or increased prescriptions that may have been not needed, or both. The questions of the benefit or harm of DTCA is very important for all medical care. New treatments for acute illness or injury will likely be advertised at some point, as well. For now, we need better studies to evaluate DTCA risks and benefits. ■