



ABSTRACTS IN URGENT CARE

- Modification of Wells criteria
- Antibiotic delay and URI
- Headaches and neuroimaging
- Age-adjusted D-dimer
- Inhaled steroids for pediatric URI

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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.

Modification of Wells criteria in cancer, previous DVT

Key point: Wells criteria for deep venous thrombosis (DVT) may need modification for patients with cancer or previous DVT. Citation: Geersing GJ, Zuithoff NP, Kearon C, et al. Exclusion of deep vein thrombosis using the Wells rule in clinically important subgroups: individual patient data meta-analysis. *BMJ*. 2014;348:g1340.

Possible DVT is an important diagnosis to make, however, many urgent cares do not have access to ultrasound. A combination of Wells rule and D-dimer test has been proposed as a reasonable option for low-risk patients, but some investigators have found that there may be some subgroups that need further evaluation or modification of this method. The authors of this article attempted to corroborate previous studies. A meta-analysis was performed of 13 previous studies with a total of 10,002 patients. Criteria of a Wells rule score <1 and a negative D-dimer was able to reduce the risk of DVT to less than 2%. Most experts use less than 2% as an acceptable error rate when ruling out DVT. The authors noted that only previous DVT and cancer crossed the 2% threshold. The authors concluded that this combination was

not useful in patients with cancer and patients with previous DVT needed one extra point added to the Wells rule score for significant sensitivity. Other findings from the review included an increased risk of blood clot with increasing Wells score and even a -2 Wells score led to a 5% risk of DVT. From an acute care perspective, it's important to understand that Wells rule score alone is not sensitive enough and that patients with cancer and previous DVT will need even more consideration than just having a normal D-dimer. ■

Impact of antibiotic delay for URI on patients' beliefs, symptoms

Key point: Delaying use of antibiotics for upper respiratory infections (URI) may reduce total antibiotic use without changes in perceived symptoms and patients' belief in the need for antibiotics. Citation: Little P, Moore M, Kelly J, et al. Delayed antibiotic prescribing strategies for respiratory tract infections in primary care: Pragmatic, factorial, randomised controlled trial. *BMJ*. 2014 Mar 5; 348:g1606.

Authors in the United Kingdom attempted to see how different methods of delaying antibiotic prescriptions for URI would effect total antibiotic prescriptions, patients' belief about antibiotics, and symptom scores. In this trial, 889 patients identified not to need immediate antibiotics were randomized to four methods to delay prescriptions or just not provided with one. The four methods were having patients call back for antibiotics, post-dating prescriptions, asking that patients come back to get previously written prescriptions, and getting the script during the visit, but being told to wait



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before use. The study found the use rate for antibiotics was similar to previous studies (around 40%) with similar control of symptoms for all groups. These strategies were also associated with less strong belief that antibiotics are needed. For the acute care provider, this adds to the evidence that delayed prescriptions can reduce antibiotic use and may reduce the perception of need for antibiotics as well.

Headaches and utilization of neuroimaging

Key point: *Neuroimaging continues to be used more than one would expect, given current guidelines.*

Citation: Callaghan BC, Kerber KA, Pace RJ, Skolarus LE, Burke JF. Headaches and neuroimaging: High utilization and costs despite guidelines. *JAMA Intern Med* 2014 Mar 17; [e-pub ahead of print].

The authors of this article attempted to quantify the percentage of patient visits for headache or migraine that resulted in imaging. Data were obtained by using billing information in a retrospective fashion. Comparing 1995 to 2010, imaging increased from 5% to almost 15% despite guidelines and efforts by multiple groups to reduce the number of scans performed. Most experts agree that too many scans are performed based on other studies that have cited abnormal test rates from 1% to 3%. This potential overuse of imaging can both waste funds that could be used elsewhere in medicine and potentially cause increased risk of cancer in patients who are scanned by computed tomography. The cost of these scans is estimated to be near \$1 billion annually. The authors concluded that perhaps patients are driving this increase more than providers and that more campaigns aimed at patients might help. From the urgent care provider perspective, carefully considering the need for imaging in each individual patient and informing patients about the risks and benefits may help reduce this expensive trend. ■

The value of age-adjusted D-dimer results

Key point: *Age-adjusted D-dimer results appear to reduce need for further testing without decreasing sensitivity in patients over 50 years of age.*

Citation: Righini M, Van Es J, Den Exter PL, et al. Age-adjusted D-dimer cutoff levels to rule out pulmonary embolism: The ADJUST-PE Study. *JAMA*. 2014;Mar 19;311:1117-1124.

D-dimer is frequently used as a first test in evaluation of patients with possible pulmonary embolus (PE). Unfortunately D-dimer levels increase with age, causing the test to be less helpful in older patients. In this study, investigators in several European cities attempted to see if an aged based cut-off for

D-dimer levels could be used without increasing the failure rate of testing. The authors surmise a cut-off of age times 10 for patients over 50 would reduce the number of patients needing further investigation but found not to have a PE. The conventional cutoff has been 500 mcg/L. A total of 3,346 patients were considered with possible PE and the prevalence of PE was 19% for the group. A total of 2,898 patients were not considered high probability. Of them, 817 had a D-dimer below the traditional cutoff and 337 patients fell between the traditional cutoff and the new age-adjusted level. The authors used a 3-month embolic event rate in patients without anticoagulant treatment as the definition of success. Only one of the 331 patients failed. In patients over age 75 (673 were non-high probability), the new strategy increased the number of patients who could be excluded from 43 to 200. Although further studies confirming this new adjustment are probably needed, acute care providers with access to a D-dimer test may consider discussing this study with patients at low probability and with a D-dimer level between the standard and the age-adjusted value. ■

Inhaled steroids for pediatric URI

Key point: *Inhaled steroids of no benefit for recurrent upper respiratory infection (URI)-induced cough in children without asthma.*

Citation: Clavenna A, Sequi M, Cartabia M, et al. Effectiveness of nebulized beclomethasone in preventing viral wheezing: An RCT. *Pediatrics*. 2014;133(3):e505-512.

The authors of this study attempted to assess the effectiveness of nebulized beclomethasone in prevention of repeat viral wheezing in patients with a new upper respiratory infection (URI). A total of 525 patients aged 1 to 5 years were evaluated in a double-blind, randomized fashion. Treatment was twice daily for 10 days and the endpoint was wheezing diagnosed by a pediatrician. No significant differences were found between the groups. Children with asthma or even possible asthma were excluded from this study group. In their introduction, the authors noted that prescription of inhaled steroids to patients with viral wheezing was quite common based on previous research. From an acute care perspective, the temptation to prescribe inhaled steroids can be strong considering the desire of most parents to “get something” to help their child with an URI. This study does not note any definite harm from the nebulized beclomethasone but does show a lack of effectiveness and should be considered when treating young children with URIs. Interestingly parents rated both the treatment and control medications as effective at near 60% rate. That is quite a significant placebo effect. ■