



ABSTRACTS IN URGENT CARE

- How Much Rest for Concussed Children?
- Shortening ABX Therapy Doesn't Stop Resistance
- Big Stones? Try Alpha Blockers
- Penicillin Allergies and Outcomes
- Cooking Fuel and Pneumonia in Children
- Can Oxacillin Help Stem MRSA?
- Antibiotics for Pneumonia
- Opioid Addicts and Urgent Care

■ 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.

Earlier Return to Activities May Benefit Concussed Children

Key point: Another (possibly surprising) view on rest after concussion.

Citation: Groot AM, Aglipay M, Momoli F. Association between early participation in physical activity following acute concussion and persistent postconcussive symptoms in children and adolescents. JAMA. 2016;316(23):2504-2514.

In this prospective, multicenter cohort study, approximately 2,400 children aged 5-18 years with acute concussion diagnosed at nine emergency departments across Canada were evaluated for persistent postconcussive symptoms (PPCS). Each child's physical activity was rated as none, light aerobic, sports specific, noncontact drills, or full contact practice. Compared with patients ordered to rest and who had no physical activity, patients with early physical activity were less likely to have PPCS. Rates of PPCS at 28 days were 43% in those with no physical activity, and 25% in those with physical activity. For the urgent care provider, this information is somewhat challenging to previous suggestions of necessary rest. A well-designed randomized clinical trial as suggested by the authors

would be the most appropriate next step in validating this information. ■

Shortening Duration of Therapy in Kids Not the Answer to Resistance

Key point: Five-day therapy for otitis media is probably a bad choice.

Citation: Hoberman A, Paradise JL, Rockette HE, et al. Shortened antimicrobial treatment for acute otitis media in young children. N Engl J Med. 2016; 375(25):2446-2456.

Duration of antibiotics for otitis media has traditionally been 10 days for younger children. This study looks at duration of 5 or 10 days for acute otitis media in 520 children age 6 months to 23 months. Both groups were given amoxicillin clavulanate for either 10 days or 5 days, with 5 days of placebo. This was a noninferiority trial.

Endpoints included response and recurrence. There were twice as many failures with the 5-day regimen vs the 10-day treatment (34% vs 16%). For the urgent care provider, shorter duration prescriptions in this age range are not advised. Further studies with more patients and different age ranges would be interesting. ■



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Alpha Blockers Especially Helpful with Larger Kidney Stones

Key point: Alpha blockers may be a good option for patients with larger ureteric stones.

Citation: Hollingsworth JM, Canales BK, Rogers MAM, et al.

“Stones between 5 mm and 10 mm were more likely to pass with alpha blocker treatment; the effect improved as size increased.”

Alpha blockers for treatment of ureteric stones: Systematic review and meta-analysis. *BMJ.* 2016;355:i6112.

This Cochrane review evaluated the use of alpha blockers to assist in passage of renal stones. The primary endpoint was passage of the stone; secondary endpoints included time and pain. A total of 55 trials were included, with results showing an improved chance of stone passage with alpha blockers. Smaller stones were not significantly helped, as most stones <5 mm pass spontaneously. Stones between 5 mm and 10 mm were more likely to pass with alpha blocker treatment. The effect improved as the stone size increased. Both increased speed and less pain were noted with alpha blockers. Serious adverse events were similar between treated and untreated groups. For the urgent care provider, this is more good evidence to consider alpha blockers for renal stone treatment. ■

Penicillin-Allergic Patients May Have Poorer Prognoses in Some Infections

Key point: *Penicillin allergy may indicate poorer prognosis.*
Citation: Macy E, Contreras R. Health care use and serious infection prevalence associated with penicillin “allergy” in hospitalized patients: a cohort study. *J Allergy Clin Immunol.* 2014;133(3):790-796.

This study looked at hospitalized patients with stated penicillin allergies, comparing duration of stay and rates of C diff, MRSA and VRE with matched cohorts. A total of 51,582 patients were matched with two controls each. Results included more use of broad-spectrum antibiotics in allergic patients. All three concerning secondary resistant infections were almost a third more prevalent in case patients. Hospital stays were longer in the penicillin allergic patient, as well. For the urgent care provider, the increased risk of penicillin-allergic patients is noteworthy even if the patient population does not reflect our setting. More research into antibiotic choice and failures would be helpful. ■

A Stovetop Solution to Pediatric Pneumonia?

Key point: *Biomass cooking fuel does not reduce pneumonia.*
Citation: Mortimer K, Ndamala CB, Naunje AW, et al. A cleaner burning biomass-fuelled cookstove intervention to prevent pneumonia in children under 5 years old in rural Malawi (the Cooking and Pneumonia Study): a cluster

randomised controlled trial. *Lancet.* [ePub December 6, 2016.]

This is an unusual study for this column to review—however, it is an interesting study showing that sometimes good intentions don’t result in an expected outcome. Also, as the urgent care community grows, many centers and large organizations are providing international care or assistance, and this might be of interest to them. It is hypothesized that indoor pollution increases the rate of pneumonia in young children and countries where solid fuels are used to cook. This trial attempted to replace the stoves currently used with more efficient stoves and, hopefully, reduce the rate of pneumonia. A total of 10,750 children were enrolled in the study. The pneumonia rate in these children was greater than 15 per 100 children years both in the control and experimental groups. Unfortunately, the authors were unable to prove reduction in pneumonia rate based on changing the type of stove used. For the urgent care provider, this study is a reminder that pollution and smoke can be a significant cause of pediatric respiratory illnesses, including pneumonia. ■

Can an Old Antibiotic Learn New Tricks?

Key point: *Adding back an old antibiotic might help with MRSA.*
Citation: Waters EM, Rudkin JK, Coughlan S, et al. Redeploying β -lactam antibiotics as a novel antivirulence strategy for the treatment of methicillin-resistant *Staphylococcus aureus* infections. *J Infect Dis.* [ePub November 14, 2016.]

Community-acquired MRSA is known to be more virulent but less resistant in the hospital. The authors in this mouse-based study attempted to prove that using oxacillin in patients with MRSA decreased virulence of the staph infection—the idea being the more virulent staph would be replaced by that with more resistance but less virulence. Although the study is by no means a final answer, particularly in patients with severe infection, purposely increasing the resistance may be a way to reduce the virulence. For the urgent care provider, it’s important to note that community-acquired MRSA tends to be less resistant and more virulent. Assuring adequate coverage when the patient is less ill will, hopefully, prevent worsening. Obviously, further human studies are necessary to draw any definite conclusions. ■

Antibiotics for Pneumonia: Does Route Make a Difference?

Key point: *IV antibiotics no better than by mouth after discharge for pneumonia.*
Citation: Shah SS, Srivastava R, Wu S, et al. Intravenous versus oral antibiotics for postdischarge treatment of complicated pneumonia. *Pediatrics.* [e-Pub December 16, 2016.]

Choice of method of antibiotic treatment continues to be a gray area in medicine. This study looks at IV vs PICC line therapy for children with pneumonia at time of hospital discharge. The care of more than 2,100 children, of which 13% received antibiotics via PICC line with the remainder receiving oral antibiotics, was reviewed to determine failure rates. Although this is a cohort study which may bias to patients receiving IV vs oral antibiotics, oral antibiotics actually had a lower failure rate. Statistically, the difference was not significant. For the urgent care provider, although not directly correlated, this offers more confidence that even patients who may have intramuscular IV antibiotics in the office and don't need hospitalization are likely to do well on oral antibiotics. Further research in this area would be helpful. ■

Addicts Aren't Getting Hooked at Urgent Care—But They May Turn Up as Patients

Key point: Urgent care centers must have a plan to address opioid overdose and prescribing.

Citation: Rudd RA, Seth P, David F, et al. Increases in drug and opioid-involved overdose deaths – United States, 2010–2015. *MMWR*. [ePub December 16, 2016.]

Drug overdose deaths nearly tripled from 1999 to 2014. In 2014, approximately 61% of the 47,055 drug overdose deaths were opioid-related. This represents over 28,000 deaths. That number rose to 33,000 in 2015. Unfortunately, while methadone-related deaths declined by 9.1% between 2015 and 2014, deaths related to heroin and other synthetic opiates (other than methadone) made up the difference. This epidemic affects all 50 states. Although death rates are highest among males between the ages of 25 and 44 years, all ages and demographics have been affected. The take-home message is clear: Although this ongoing epidemic—and related deaths—do not have their origin in urgent care, urgent care centers need to have a plan to recognize and treat overdoses that may, unfortunately, arrive at their center. ■

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