



# ABSTRACTS IN URGENT CARE

- Risk Factors for Clinical Failure in Cellulitis and Skin Abscess
- Waiting Room Art
- Decision Rule for Syncope
- Foley Catheter Trauma
- Urine Odor and UTI

■ NAHUM KOVALSKI, BSc, MDCM

Each month, Dr. Nahum Kovalski reviews a handful of abstracts from, or relevant to, urgent care practices and practitioners. For the full reports, go to the source cited under each title.

## Risk Factors for Clinical Failure in Cellulitis and Skin Abscess

**Key point:** Hospitalized patients with obesity may experience clinical failure because of inadequate antibiotic dosing.

**Citation:** Halilovic J, Heintz BH, Brown J. Risk factors for clinical failure in patients hospitalized with cellulitis and cutaneous abscess. *J Infect.* 2012;65(2):128-134.

Although most individuals with cellulitis or skin abscess are managed as outpatients, hospital admission is sometimes necessary. Several risk factors for hospitalization have been identified. Now, investigators in California have conducted a retrospective cohort study to examine factors associated with clinical failure in hospitalized patients with these skin and soft-tissue infections (SSTIs) — an issue that has previously received scant attention. The study was conducted at a single academic tertiary-care hospital and involved 210 adults admitted between July 1, 2009, and June 30, 2011, for cellulitis with or without abscess. Clinical failure was defined as treatment failure (repeat incision and drainage, change in antibiotic therapy, or — at hospital discharge — extension of the originally prescribed treatment duration because of inadequate clinical response), recurrence, emergency room visit, rehospitalization, or SSTI-related death ≤30 days after discharge.

Eight-two percent of the patients were admitted through the emergency department, and 39% were “bounce-backs” — that is, they had received treatment for the same problem within the preceding 30 days. Fifty-five percent of the patients had lower-extremity infections; 48% had abscesses.

Among the 106 patients with clinical outcomes evaluable at the end of therapy, 34 (32%) experienced clinical failure. Risk factors independently associated with failure were weight ≥100 kg (odds ratio, 5.20; 95% confidence interval, 1.49–18.21), body-mass index ≥40 (OR, 4.10; 95% CI, 1.21–13.84), inadequate empirical antibiotic therapy (OR, 9.25; 95% CI, 1.87–45.73), recent antibiotic therapy (OR, 2.98; 95% CI, 1.10–8.10), and low antibiotic dose at the time of hospital discharge (OR, 3.64; 95% CI, 1.41–9.41).

Published in *J Watch Infect Dis.* May 2, 2012 — Larry M. Baddour, MD. ■

## Placing Art in the Waiting Room Mellows Patients and Visitors

**Key point:** A simple study shows that installing images of nature in the waiting room can reduce restless behavior.

**Citation:** Nanda U, Chanaud C, Nelson M, et al. Impact of visual art on patient behavior in the emergency department waiting room. *J Emerg Med.* 2012;43(1):172-181.

Prior evidence suggests that images of nature can lessen anxiety and perceived pain in healthcare environments. In the current study, investigators used a systematic observation tool to quantify patient and visitor behavior before and after installation of still and video images of nature in the waiting rooms of



Nahum Kovalski is an urgent care practitioner and Assistant Medical Director/CIO at Terem Emergency Medical Centers in Jerusalem, Israel. He also sits on the *JUCM* Editorial Board.

Houston's two Level 1 trauma centers.

After the installation, there was a significant reduction in restless patient/visitor behavior (getting out of the seat, pacing, asking questions at the front desk, stretching, and fidgeting). The noise level decreased by a mean of 6 decibels — only partly attributable to a reduction in the number of TV screens with sound.

Published in *J Watch Emerg Med*. May 11, 2012 — Daniel J. Pallin, MD, MPH. ■

### New Decision Rule for Syncope Safely Reduces Hospitalizations

**Key point:** *At a single emergency department, implementation of the Boston Syncope Criteria reduced admissions by 11% and identified all patients with adverse outcomes.*

**Citation:** Grossman SA, Bar J, Fischer C, et al. Reducing admissions utilizing the Boston Syncope Criteria. *J Emerg Med*. 2012;42(3):345-352.

The cost of syncope hospitalizations in the is roughly \$2 billion per year. Investigators assessed the effectiveness and safety of a clinical decision rule (the Boston Syncope Criteria) to identify syncope patients at risk for adverse outcomes. In a prospective study at a single emergency department (ED), the investigators enrolled 293 adults who presented with syncope (defined as loss of consciousness for <5 minutes with spontaneous recovery), and were managed at physician discretion before implementation of the rule, and 277 adults who presented after implementation. The rule recommends admission for patients with acute coronary syndrome, conduction disease, worrisome cardiac history (such as dysrhythmia, pacemaker), valvular heart disease, family history of sudden death, volume depletion, persistent abnormal vital signs in the ED, or primary central nervous system event.

Disposition decisions were in accordance with the rule in 96% of cases. The hospital admission rate decreased from 69% before implementation to 58% after. There were no adverse outcomes within 30 days among patients who were discharged according to the rule. The rule had a sensitivity of 100% and a specificity of 57% for identifying patients with adverse outcomes.

Published in *J Watch Emerg Med*. May 4, 2012 — Daniel J. Pallin, MD, MPH. ■

### Genitourinary Trauma with Foley Catheters

**Key point:** *Genitourinary trauma is likely as important a complication as infection.*

**Citation:** Leuck AM, Wright D, Ellingson L, et al. Complications of Foley catheters — is infection the greatest risk? *J Urol*. 2012;187(5):1662-1666.

The impetus to reduce Foley catheter use in hospitalized patients comes mostly from a desire to prevent catheter-associated uri-

nary infections. However, anyone who practices inpatient medicine is familiar with the agitated older man who yanks at his Foley catheter and induces traumatic injury to the bladder or urethra. Researchers at the Minneapolis Veterans Affairs hospital collected data prospectively on all hospitalized patients with Foley catheters during a 16-month period and determined the incidence of Foley-related trauma.

During 6,500 patient-days of Foley catheter use, 89 patients suffered 100 instances of catheter-associated genitourinary trauma. Among the adverse events were 11 cases of "creation of a false passage," 7 cases of prostatic or intraperitoneal catheter placement, 7 cases of penile trauma or urethral meatal erosion, and 33 cases of gross hematuria. By comparison, 116 episodes of urinary infection were documented in this same cohort, but only 21 met criteria for symptomatic infection (as opposed to asymptomatic bacteriuria).

Published in *J Watch Gen Med*. May 10, 2012 — Allan S. Brett, MD. ■

### Is Urine Odor Associated with UTI?

**Key point:** *Parental report of malodorous urine was significantly associated with urinary tract infection in young febrile children.*

**Citation:** Gauthier M, Gouin S, Phan V, Gravel J. Association of malodorous urine with urinary tract infection in children aged 1 to 36 months. *Pediatrics*. 2012;129(5):885-890.

Urine has an odor, but often parents describe the odor of their child's urine as stronger or more objectionable than usual. To determine whether parent report of urine odor is a reliable indicator of urinary tract infection (UTI), Canadian researchers analyzed symptom questionnaires for 331 children (age range, 1–36 months) who presented to an emergency department with symptoms suggestive of UTI (>90% had fever without source, others had unexplained vomiting or irritability without fever). Urine obtained for culture was collected by bladder catheterization (90%), midstream clean catch (9%), or suprapubic aspiration (1%). Questionnaires were completed before urinalysis results were known.

Fifteen percent of children had a UTI (defined as a positive urine culture). Urine that was stronger or more offensive than usual was reported by parents in 57% of children with UTI and 32% of children without UTI. In multiple regression, children with malodorous urine had significantly increased odds of UTI (odds ratio, 2.73), after adjustment for sex and the presence of vesicoureteral reflux. The sensitivity, specificity, and positive likelihood ratio of malodorous urine as an indicator of UTI were 57%, 68%, and 1.8, respectively. Urine odor was more strongly associated with UTI than vomiting, diarrhea, or dysuria.

Published in *J Watch Ped Adol Med*. May 16, 2012 — Cornelius W. Van Niel, MD. ■