



On Croup, Wet Sutures, Fast Tracking the ED, Acetaminophen and ALT, and Stone Formation

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Each month, Dr. Nahum Kovalski will review 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.

Dexamethasone Has Advantage Over Prednisolone in Children with Croup

Citation: Sparrow A, Geelhoed G. *Arch Dis Child*. 2006;91:580-583.



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Children with croup who are treated with prednisolone are more likely than those treated with dexamethasone to return for additional medical care, researchers in Australia reported in the July issue of the *Archives of Diseases in Childhood*.

A single treatment of oral dexamethasone improves patient outcomes. Prednisolone has pharmacokinetic properties similar to dexamethasone, but has the advantage of being commercially available in liquid form.

The researchers compared the relative efficacy of prednisolone matched for potency to dexamethasone in 133 children between 3 and 142 months old with mild-to-moderate croup. In a double-blinded, controlled trial, the children were randomized to a single oral dose of dexamethasone 0.15 mg/kg or a single oral dose of prednisolone 1 mg/kg.

The main outcome measure was unscheduled re-presenta-

tion to medical care, determined by telephone follow-up seven to 10 days after discharge. Secondary outcome measures included croup score, adrenaline use, time in the emergency department, and duration of croup and viral symptoms.

Nineteen of 65 (29%) prednisolone-treated patients re-presented to medical care, compared with five of 68 (7%) dexamethasone-treated children. No significant differences in secondary outcomes were observed.

"Dexamethasone and prednisolone seem equally effective when first given but relapse and re-attendance to medical care is more common with prednisolone which may reflect its shorter half life," the researchers concluded. ■

Can Sutures Get Wet? Prospective Randomised Controlled Trial of Wound Management in General Practice

Citation: Heal C, Buettner P, Raasch B, et al. *BMJ*. 2006;332:1053-1056.

The purpose of this study was to compare standard management of keeping sutured wounds dry and covered versus allowing sutured wounds to be uncovered and wet within the first 48 hours after minor skin excision.

This was a prospective, randomised, controlled, multicenter trial testing for equivalence of infection rates. The study was done in a primary care regional center in Queensland, Australia; 857 patients were randomised to either keep their wound dry and covered (n=442) or remove the dressing and wet the wound (n=415).

The incidence of infection in the intervention group (8.4%) was not inferior to the incidence in the control group (8.9%) ($P < 0.05$).

These results indicate that sutured wounds can be uncovered and allowed to get wet in the first 48 hours after minor skin excision without increasing the incidence of infection. ■



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Effects of a Fast-track Area on Emergency Department Performance

Citation: Plunkett PK. First aid, fast track and the fertile fields of peer review. *Eur J Emerg Med.* 2006;13:1-2.



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To determine if a fast-track area (FTA) would improve emergency department (ED) performance, a historical cohort study was performed in the ED of a tertiary care adult hospital in the United States.

Two consecutive one-year periods, pre-FTA opening from February 1, 2001 to January 31, 2002 and after FTA opening-from February 1, 2002 to January 31, 2003 were studied. Daily values of the following variables were obtained from the ED patient tracking system:

- To assess ED effectiveness: waiting time to be seen (WT), length of stay (LOS).
- To assess ED care quality: rate of patients left without being seen (LWBS) mortality, and revisits.
- To assess determinants of patient homogeneity between periods: daily census, age, acuity index, admission rate and emergent patient rate.

Results showed that despite an increase in the daily census (difference [diff] 8.71, 95% confidence interval [CI] 6 to 11.41), FTA was associated with a decrease in:

- WT (diff -51 min, 95% CI [-56 to -46])
- LOS (diff -28 min, 95% CI [-31 to -23])
- LWBS (diff -4.06, 95% CI [-4.48 to -3.46])
- There was no change in the rates of mortality or revisits

In conclusion, the opening of an FTA improved ED effectiveness, measured by decreased WT and LOS, without deterioration in the quality of care provided, measured by rates of mortality and revisits. ■

Aminotransferase Elevations in Healthy Adults Receiving 4 Grams of Acetaminophen Daily

Citation: Watkins PB, Kaplowitz N, Slattery JT, et al. *JAMA.* 2006;296:87-93.

During a clinical trial of a novel hydrocodone/acetaminophen combination, a high incidence of serum alanine aminotransferase (ALT) elevations was observed.

The purpose of this study was to characterize the incidence and magnitude of ALT elevations in healthy participants receiving 4 g of acetaminophen daily, either alone or in combination with selected opioids, as compared with participants treated with placebo. This was a randomized, single-blind, placebo-con-

trolled, five-treatment, parallel-group, inpatient, diet-controlled (meals provided), longitudinal study of 145 healthy adults in two U.S. inpatient clinical pharmacology units. Each participant received either placebo (n=39), one of three acetaminophen/opioid combinations (n=80), or acetaminophen alone (n=26). Each active treatment included 4 g of acetaminophen daily, the maximum recommended daily dosage. The intended treatment duration was 14 days.

None of the 39 participants assigned to placebo had a maximum ALT of more than three times the upper limit of normal. In contrast, the incidence of maximum ALT of more than three times the upper limits of normal was 31% to 44% in the four treatment groups receiving acetaminophen, including those participants treated with acetaminophen alone. Compared with placebo, treatment with acetaminophen was associated with a markedly higher median maximum ALT (ratio of medians, 2.78; $P < .001$). Trough acetaminophen concentrations did not exceed therapeutic limits in any participant and, after active treatment was discontinued, often decreased to undetectable levels before ALT elevations resolved.

Initiation of recurrent daily intake of 4 g of acetaminophen in healthy adults is associated with ALT elevations and concomitant treatment with opioids does not seem to increase this effect. History of acetaminophen ingestion should be considered in the differential diagnosis of serum aminotransferase elevations, even in the absence of measurable serum acetaminophen concentrations. ■

Impact of Dietary Habits on Stone Incidence

Citation: Siener R. *Urological Res.* 2006;34:131-133.

Changes in dietary habits and lifestyle are suggested to contribute markedly to the rise in the prevalence and incidence of urolithiasis during the past decades.



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Insufficient fluid intake and diets rich in animal protein are considered to be important determinants of stone formation.

Overweight and associated dietary pattern additionally contribute to the increasing incidence and prevalence of stone disease. Reduction of overweight through extreme fasting or high-protein weight-loss diets (e.g., Atkins diet) also appear to affect stone formation.

Although there is evidence that changes in dietary habits can reduce urinary risk factors and the risk of stone formation, further randomized controlled clinical trials are necessary to evaluate long-term effects of dietary interventions on stone disease. ■