On the Elbow Extension Test, Oral Co-amoxiclav for Pyelonephritis, Dexamethasone, and Acute Migraine

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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.

Should the Elbow Extension Test Be Used to Rule Out Bony Injury?

Key point: Full elbow extension had a negative predictive value for fracture of 98.4% in adults and 95.8% in children.

Citation: Appelboam A, Reuben AD, Benger JR, et al. Elbow extension test to rule out elbow fracture: Multicentre, prospective validation and observational study of diagnostic accuracy in adults and children. *BMJ*. 2008;337:a2428.

The objective of this study was to determine whether full elbow extension as assessed by the elbow extension test can be used in routine clinical practice to rule out bony injury in patients presenting with elbow injury.

This was a multicenter, prospective, interventional validation study in secondary care, covering five emergency departments in southwest England.

Of 1,740 eligible participants, 602 patients were able to fully extend their elbow; 17 of these patients had a fracture. Two adult patients with olecranon fractures needed a change in treatment. In the 1,138 patients *without* full elbow extension, 521 fractures were identified.

The elbow extension test can be used in routine practice to inform clinical decision making. Patients who cannot fully extend their elbow after injury should be referred for radiography. For those able to fully extend their elbow, radiography can be deferred if the practitioner is confident that an olecranon fracture is not present. ■

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Oral Co-amoxiclav, Alone or in Combination for Pyelonephritis in Children

Key point: Treatment with oral antibiotics is as effective as parenteral then oral treatment in the management of the first episode of clinical pyelonephritis in children.

Citation: Montini G, Toffolo A, Zucchetta P, et al. Antibiotic treatment for pyelonephritis in children: Multicentre randomised controlled non-inferiority trial. *BMJ*. 2007;335:386.

This was a multicenter, randomized controlled, open-label, parallel group, non-inferiority trial, carried out in 28 pediatric units in northeast Italy. Participants were 502 children aged 1 month to <7 years with clinical pyelonephritis. Interventions tested were oral co-amoxiclav (50 mg/kg/day in three doses for 10 days) or parenteral ceftriaxone (50 mg/kg/day in a single parenteral dose) for three days, followed by oral co-amoxiclav (50 mg/kg/day in three divided doses for seven days).

Intention-to-treat analysis showed no significant differences between oral (n=244) and parenteral (n=258) treatment, both in the

- primary outcome: scarring scintigraphy at 12 months 27/197 (13.7%) vs. 36/203 (17.7%)
- secondary outcomes:
  - time to defervescence 36.9 hours (SD 19.7) vs. 34.3 hours
  - white cell count 9.8x109/l vs. 9.5x109/l

– percentage with sterile urine 185/186 vs. 203/204. ■

Effectiveness of IM Dexamethasone for Acute Exudative Pharyngitis

Key point: *Sore throat in patients with acute exudative pharyngitis is greatly reduced by an 8 mg single dose of intramuscular dexamethasone accompanied by antibiotic.*

Citation: Tasar A, Yanturali S, Topacoglu H, et al. Clinical efficacy of dexamethasone for acute exudative pharyngitis. *J Emerg Med*. 2008;35(4):363-367.

The objective of this study was to investigate whether treatment with single-dose dexamethasone can provide relief of symptoms in acute exudative pharyngitis.

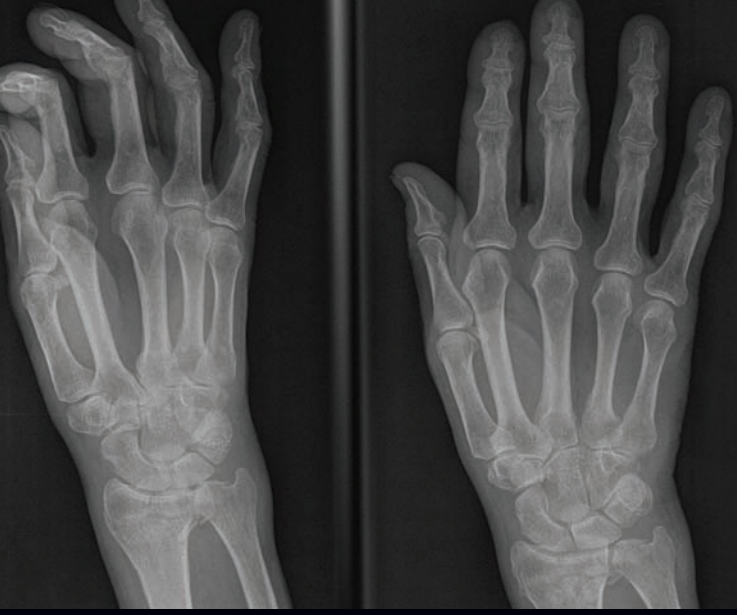
A prospective, randomized, double-blinded, placebo-controlled clinical trial was undertaken over a three-month period in a university-based emergency eepartment. The study included all consecutive patients between 18 and 65 years of age presenting with acute exudative pharyngitis, sore throat, odynophagia, or a combination, and with more than two Centor criteria.

Each patient was treated empirically with azithromycin and acetaminophen for three days. The effects of placebo were compared with those of a fixed single dose (8 mg) of intramuscular injection of dexamethasone.

Time to perceived onset of pain relief was 8.06 ± 4.86 h in steroid-treated patients, as opposed to 19.90 ± 9.39 h in the control group (p=0.000). The interval required to become pain-free was 28.97 ± 12.00 h in the dexamethasone group, vs. 53.74 ± 16.23 h in the placebo group.

No significant difference was observed in vital signs between the regimens.

Sore throat and odynophagia in patients with acute exudative pharyngitis may respond better to treatment with an 8 mg single dose of intramuscular dexamethasone accompanied by an antibiotic regimen than to antibiotics alone. ■



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Nothing supports this goal more than **Insights in Images**, where urgent care practitioners can share the details of actual cases, as well as their expertise in resolving those cases. After all, in the words of UCAOA Executive Director Lou Ellen Horwitz, everyday clinical practice is where "the rubber meets the road."

Physicians, physician assistants, and nurse practitioners are invited to submit cases, including x-rays, EKGs, or photographic displays relating to an interesting case encountered in the urgent care environment. Submissions should follow the format presented on the preceding pages.

If you have an interesting case to share, please e-mail the relevant images and clinical information to *editor@jucm.com*. We will credit all whose submissions are accepted for publication.

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ABSTRACTS IN URGENT CARE

New Class of Drugs for Acute Migraine

Key point: *Telcagepant, a calcitonin gene-related peptide antagonist, is as effective as zolmitriptan, with fewer adverse effects.*

Citations: Ho TW, Ferrari MD, Dodick DW. Efficacy and tolerability of MK-0974 (telcagepant), a new oral antagonist of calcitonin gene-related peptide receptor, compared with zolmitriptan for acute migraine: A randomised, placebo-controlled, parallel-treatment trial. *Lancet*. 2008;372:2115-2123. Edvinsson L. CGRP-receptor antagonism in migraine treatment. *Lancet*. 2008;372:2089-2090.

Migraine headache is commonly treated with triptans (serotonin-receptor antagonists), but—because these agents are associated with side effects, such as chest discomfort, dizziness, and throat tightness—they are poorly tolerated by some patients and contraindicated in those with cardiovascular disease.

Telcagepant is a new calcitonin gene-related peptide antagonist that lacks the vasoconstrictor effects of triptans.

In a randomized, controlled, double-blind, parallel-treatment trial funded by the maker of telcagepant, 1,380 adult patients (mean age, 42; 85% female) with acute migraine received one of four oral treatments: telcagepant (160 mg or 300 mg), zolmitriptan (5 mg), or placebo. The study was conducted at 81 outpatient primary care and headache centers in Europe and the U.S.

"An editorialist suggests the efficacy of telcagepant 'marks a new era in migraine therapy.'"

Patients were excluded if they had cardiovascular disease or uncontrolled hypertension or had used selective serotonin reuptake inhibitors, monoamine oxidase inhibitors, or propranolol within one month before the screening visit. Patients recorded headache pain severity as none, mild, moderate, or severe, and presence or absence of phonophobia, photophobia, and nausea at baseline; every 30 minutes for 3 hours; and at 4, 6, 8, and 24 hours.

Telcagepant 300 mg and zolmitriptan 5 mg were similarly effective, and both were superior to telcagepant 150 mg and placebo for pain relief; pain freedom; and absence of phonophobia, photophobia, and nausea. No deaths and only one serious adverse event (in a placebo recipient) were reported. Adverse events were significantly more common in the zolmitriptan group than in the other three groups.

An editorialist suggests that the proof of efficacy of telcagepant—the first of a new class of drugs—"marks a new era in migraine therapy."

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