



On Steroids for Bronchiolitis, Risk for Thromboembolism, Vocal Cord Dysfunction, and Surgery for Sciatica and Ingrown Toenails

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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.

A Controlled Clinical Trial of Steroids for Bronchiolitis

Key point: One dose of oral dexamethasone was no different from placebo.

Citation: A multicenter, randomized, controlled trial of dexamethasone for bronchiolitis. *N Engl J Med.* 2007;357:331-339.

Bronchiolitis is the leading cause of hospitalization of infants in the U.S. Use of steroids for infants with bronchiolitis remains controversial because of the lack of high-quality, sufficiently powered studies.

In a multisite, double-blind clinical trial, researchers randomized 600 infants (age range, 2 months to 12 months) who presented to the emergency department with no prior history of wheezing and a clinical picture consistent with moderate-to-severe bronchiolitis to receive either a single dose of oral dexamethasone (1 mg/kg) or placebo. The primary outcome was hospitalization four hours after drug administration.

The admission rate was virtually identical in the steroid and placebo groups (39.7% and 41.0%, respectively). No differences emerged in subgroup analyses of infants who were

positive for respiratory syncytial virus, those younger than 6 months, or those with a history of eczema or a family history of asthma. [Published in *J Watch Ped Adolesc Med*, July 25, 2007—Howard Bauchner, MD.] ■

Risk for Thromboembolism During Travel

Key point: Risk for thromboembolism on long plane rides is 1 in 6,000.

Citation: The WRIGHT Project Study Group. WHO Research Into Global Hazards of Air Travel (WRIGHT) Project, Final Report of Phase I. World Health Organization, 2007. Available at: http://www.who.int/cardiovascular_diseases/wright_project/phase1_report/en/index.html

The risk for venous thromboembolism approximately doubles after a plane flight lasting at least four hours but is still low, about 1 in 6,000.

This report, released online, is based largely on three epidemiologic studies and two pathophysiologic studies.

Among the findings:

- The risk also increases with other forms of travel—such as by car, bus, or train—where riders sit immobile for long periods.
- The risk remains elevated for two months after the trip.
- The risk is also increased by obesity, use of oral contraceptives, presence of the factor V Leiden mutation, and in patients taller than 6 feet 2 inches or shorter than 5 feet 2 inches. ■



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Vocal Cord Dysfunction—An Overlooked Cause of Respiratory Symptoms

Key point: *The condition is often mistaken for asthma.*

Citation: Davis RS, Brugman SM, Larsen GL. Use of videography in the diagnosis of exercise-induced vocal cord dysfunction: A case report with video clips. *J Allergy Clin Immunol.* 2007;119:1329-1331.

Vocal cord dysfunction—a paradoxical adduction of the vocal cords during inspiration—is an occasionally overlooked cause of wheezing, stridor, or dyspnea. In this brief report, allergy and pulmonary specialists describe a 15-year-old girl who complained of “difficulty breathing and wheezing” during competitive swimming.

An extensive evaluation for asthma was negative, and empiric asthma therapy was ineffective. The patient’s father videotaped her during and just after swimming and was able to capture obvious inspiratory stridor. Review of the father’s video by the patient’s physicians led to the correct diagnosis; the video can be viewed with the online version of the article (clip E3).

Physicians should be familiar with vocal cord dysfunction, an entity that is often mistaken for asthma. If a patient does not respond to conventional bronchodilator therapy and experiences respiratory difficulty mainly in inspiration rather than expiration, a diagnosis of vocal cord dysfunction, rather than asthma, should be considered. [Published in *J Watch Gen Med*, July 12, 2007—Allan S. Brett, MD.] ■

Surgery for Sciatica

Key point: *Early symptom relief is the only real benefit of surgery; otherwise, surgery and conservative treatment yield equivalent outcomes at one year.*

Citation: Peul WC, van Houwelingen HC, van den Hout WB, et al. Surgery versus prolonged conservative treatment for sciatica. *N Engl J Med.* 2007;356:2245-2256.

Surgery often is recommended for patients with sciatica who do not improve after receiving conservative treatment for six weeks. To compare two treatment strategies, Dutch researchers recruited patients who had severe sciatica pain six to 12 weeks after presenting to their general practitioners. Patients were referred for magnetic resonance imaging and evaluated by a neurologist, who confirmed that disk herniation was the cause of symptoms.

Finally, 283 patients were randomized to early (within two weeks) discectomy or continued conservative treatment provided by their general practitioners, with surgery if needed for intractable pain. Research nurses were involved in pain management in the conservative-treatment group.

Early surgery provided quicker symptom relief (four vs. 12

weeks after randomization). In the early-surgery group, 3% of patients required a second procedure, and 1.5% had self-limiting complications. Forty percent of patients in the conservative-treatment group crossed over to surgery because of continued pain after a mean of 19 weeks. Outcomes did not differ between this group and the early-surgery group. At one year, there were no differences in symptoms or disability between the early-surgery and conservative-treatment groups.

An editorialist notes that patients with persistent sciatica have a reasonable choice between treatments that depends on aversion to surgical risk, severity of symptoms, and willingness to wait for resolution of symptoms.

That this large trial showed equivalent outcomes at one year with or without early surgery supports continued conservative treatment and referral to a primary care physician. Most sciatica pain improves within three months, and delaying surgery for a trial of nonsurgical care does not worsen outcome. [Published in *J Watch Emerg Med* July 13, 2007—]. Stephen Bohan, MD, MS, FACP, FACEP.] ■

Surgical Technique and Local Antibiotics for Ingrown Toenail

Key point: *Partial nail avulsion with phenolization is superior to partial nail avulsion with matrix excision. Antibiotics do not appear to be necessary.*

Citation: Bos AMC, van Tilburg MWA, van Sorge AA, et al. Randomized clinical trial of surgical technique and local antibiotics for ingrowing toenail. *Br J Surg.* 2007;94:292-296.

The aim of this study was to determine the most effective surgical treatment for ingrown toenail. The study authors randomized 117 patients into the following treatment groups: partial nail avulsion plus matrix plus antibiotics, partial nail avulsion plus matrix no antibiotics, partial nail avulsion plus phenol plus antibiotics, and partial nail avulsion plus phenol minus antibiotics.

All patients had partial nail avulsion. This was combined with excision of the matrix or application of phenol, with or without local application of gentamicin afterward. The measured endpoints were infection at one week and recurrence at one year.

Infection rates were unrelated to the use of antibiotics ($P=.13$). However, recurrence rates were lower after phenolization of the nail bed (eight of 58) compared with excision of the nail matrix (23 of 59) ($P=.002$).

Ingrown toenail (unguis incarnatus) is a common, sometimes disabling condition. This randomized trial suggested that partial nail avulsion with phenolization of the nail matrix is superior to partial nail avulsion with matrix excision. Antibiotics do not appear to be necessary. The one-year recurrence rate of 14% in the partial excision phenol-treated group demonstrated that there is still room for improvement in the management of this minor surgical condition. ■