

UPDATE

Abstracts and news from the medical literature of interest to the primary care physician

Aortic Stenosis Patients Given Reason To Smile

- **The Issue:** The Cleveland Clinic Investigators decided to challenge the theory that patients with aortic stenosis should not be treated with the potent vasodilator, nitroprusside.
- **The Study:** Over 21 months, 25 patients with heart failure, left ventricular ejection fraction $\leq 35\%$, aortic valve area $\leq 1 \text{ cm}^2$, and depressed cardiac index were treated with intravenous nitroprusside. All patients tolerated nitroprusside infusion well.
- **The Results:** Nitroprusside infusion rapidly improved hemodynamic parameters without any apparent side-effects. These results suggest that the fixed aortic valve is not the only source of afterload imposed on a failing ventricle. The prognosis for aortic stenosis patients is so grim, that any new therapy is welcome.

Khot UN, Novaro GM, Popovic ZB, et al: Nitroprusside in critically ill patients with left ventricular dysfunction and aortic stenosis. *N Engl J Med* 2003; 348(18):1756-63.

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Predictive Power of Pro-BNP

- **The Issue:** Brain natriuretic peptide (BNP) has been shown to be associated with left ventricular dysfunction. Pro-BNP, the precursor of BNP, may provide the same diagnostic information as BNP, but less is known about its clinical utility. A recent study evaluated the accuracy of pro-BNP levels for predicting adverse events in patients with pulmonary embolism (PE).
- **The Study:** Of the 73 consecutive patients with PE, 20 had adverse events. Two patients with adverse events did not have a diagnosis of right ventricular dysfunction. The median pro-BNP levels were 121 pg/mL in patients with benign outcomes and 4,250 pg/mL in patients with adverse events ($P < 0.0001$).
- **The Results:** Some experts advocate home anticoagulation treatment of uncomplicated PE. Many clinicians, however, are reluctant to discharge patients early without assurance of a benign outcome. Pro-BNP levels, because they appear to be highly correlated with adverse events, may be useful in supporting disposition decisions.

Kucher N, Printzen G, Doernhoefer T, et al: Low pro-brain natriuretic peptide levels predict benign clinical outcome in acute pulmonary embolism. *Circulation* 2003; 107:1576-8.

Treating Primary Care Patients With Depression

- **The Issue:** Patients who are treated for depression in primary care settings might be different from those who are treated in secondary care settings. Yet, most of the data that guide the use of antidepressant therapy emanate from trials in secondary care settings.
- **The Study:** A recent meta-analysis used 11 studies involving primary care settings only. All 11 were randomized, controlled trials in which tricyclic antidepressants were compared with selective serotonin reuptake inhibitors (SSRIs) in the treatment of primary care patients with depression. Treatment efficacy was the same in both groups. A slight trend in favour of tricyclics was found when depression scales were used to measure outcome, and a slight trend in favour of SSRIs was found when global impression scores were used. Significantly fewer participants withdrew from SSRI treatment.
- **The Results:** It was concluded that the two classes of drugs are equally effective, although SSRIs might be better tolerated. Also, it was found that a gap still exists in knowledge about the use of antidepressants in primary care settings due to the limited number of studies.

MacGillivray S, Arroll B, Hatcher S, et al: Efficacy and tolerability of selective serotonin reuptake inhibitors compared with tricyclic antidepressants in depression treated in primary care: Systematic review and meta-analysis. *BMJ* 2003; 326(7397):1014-7.

Babies and Sleep Positions

- **The Issue:** The incidence of sudden infant death syndrome (SIDS) has been reduced dramatically by having babies sleep in the supine position. However, concerns remain about other problems that might arise from non-prone sleep positions, such as gastroesophageal reflux and aspiration pneumonia.
- **The Study:** Researchers asked the parents of 3,733 infants from eastern Massachusetts and northwestern Ohio to complete questionnaires when their babies were one, three, and six months of age. Infants were categorized into three groups by usual sleep position: supine, side, or prone. Compared with infants who slept in the prone position, infants who slept supine or on their sides were not at significantly increased risk for any of the factors studied, including fever, cough, respiratory problems, difficulty sleeping, stuffy nose, spitting up or vomiting, diarrhea, and hospitalization.
- **The Results:** These results show that not only does supine sleep decrease the incidence of SIDS, but it also is not associated with other harmful effects (with the exception of plagiocephaly [deformity or misshaping of the skull], which is now a common cosmetic problem).

Hunt CE, Lesko SM, Vezina RM, et al: Infant sleep position and associated health outcomes. *Arch Pediatr Adolesc Med* 2003; 157(5):469-74.



Does Weight Watchers® Really Work?

- **The Issue:** How should clinicians guide patients who ask about joining commercial weight-loss programs? Investigators sought to determine the effectiveness of a commercial program run by Weight Watchers International®.
- **The Study:** A total of 65 men and 358 women (body mass index 27 to 40) were randomized to a self-help intervention or to a Weight Watchers program. During the two-year study, the self-help group underwent two short counselling sessions while the commercial program group received food, activity, and behaviour-modification plans, which were promoted at hour-long weekly meetings.
- **The Results:** At one year, the self-help group had lost a mean of 1.3 kg, with a return to baseline weight at two years. The commercial program group had lost a mean of 4.3 kg at one year and 2.9 kg at two years. The results of this study may not be generalizable to other commercial weight-loss programs. In addition, the actual average loss seems modest, given the intensity and cost of the commercial program. Thus, the question of cost-effectiveness looms large.

Heshka S, Anderson JW, Atkinson RL, et al: Weight loss with self-help compared with a structured commercial program: A randomized trial. *JAMA* 2003; 289(14):1792-8.

TIA Treatment All Over The Map

- **The Issue:** Guidelines for evaluating and treating transient ischemic strokes (TIAs) in the emergency department (ED) vary, but most recommend rapid evaluation of risk factors and treatment to reduce stroke risk. Researchers set out to examine how TIAs are evaluated and treated in the ED.
- **The Study:** Researchers retrospectively evaluated the charts on 293 patients who had been diagnosed with a TIA at one hospital's ED. In the ED, 81% had a computed tomography scan, 74% had a complete blood count taken, and 75% had an electrocardiography. Only 16% underwent carotid Doppler ultrasound; an additional 26% had outpatient Doppler ultrasound scheduled. At discharge, 28% did not receive antithrombotic medication.
- **The Results:** These findings reinforce a major and irrefutable principle: The so-called standard of care for evaluating TIAs is essentially all over the map. More rigid criteria are needed for identifying suspected TIAs in the ED, for regularly using tests to diagnose treatable causes, and for using antithrombotic therapy in all such patients.

Chang E, Holroyd BR, Kochanski P, et al: Adherence to practice guidelines for transient ischemic attacks in an emergency department. *Can J Neurol Sci* 2002; 29(4):358-63.

The Safest Approach to Acne

- **The Issue:** The usual dosage of oral doxycycline for treating acne is 50 mg to 100 mg twice daily. Previous research has suggested other potential actions of doxycycline, including down-regulation of inflammatory mediators and inhibition of *Propionibacterium acnes*-derived lipase, with a resultant reduction in levels of follicular-free fatty acids.
- **The Study:** Investigators examined the effect on moderate facial acne of a six-month course of doxycycline, 20 mg, twice daily compared with placebo. Among the 40 patients in the study, the mean reduction in inflammatory lesions and comedones was 52% in the doxycycline group versus 18% in the placebo group. There were no changes in either group in the composition of the surface skin flora or in antimicrobial susceptibility.
- **The Results:** This low-dose regimen appears to treat acne effectively without altering the antimicrobial susceptibility of the skin flora. Furthermore, previous trials of low-dose doxycycline have demonstrated no change in the antibiotic sensitivity of bacteria in the gastrointestinal and genitourinary tracts. This therapy may be the safest approach to using antibiotics for treating acne.

Skidmore R, Kovach R, Walker C, et al: Effects of subantimicrobial-dose doxycycline in the treatment of moderate acne. *Arch Dermatol* 2003; 139(4):459-64.

An Alternative Treatment for GERD

- **The Issue:** Radiofrequency energy (RFe) is a nonsurgical, endoscopic alternative for treating patients who have symptomatic gastroesophageal reflux disease (GERD). Despite fairly expansive use in the U.S., the process by which RFe reduces reflux is unclear.
- **The Study:** In this study, researchers evaluated the effects of RFe on pathophysiologic reflux mechanisms in 20 patients with symptomatic GERD and either no, or mild-to-moderate, esophagitis. One patient withdrew after RFe treatment; the remaining patients were assessed by manometry (at six months) and 24-hour pH monitoring (at six and 12 months). Compared with pre-treatment measures, RFe treatment significantly increased lower esophageal sphincter pressure and reduced the median number of reflux episodes and esophageal acid exposure times.
- **The Results:** This study was not controlled or blinded and results could be biased by subjective patient-directed end points. One encouraging finding is that only one patient resumed proton pump inhibitor therapy after RFe therapy. Future controlled and blinded studies are needed before we know how RFe treatment achieves its anti-reflux effect.


Tam WC, Schoeman MN, Zhang Q, et al: Delivery of radiofrequency energy to the lower esophageal sphincter and gastric cardia inhibits transient lower esophageal sphincter relaxations and gastroesophageal reflux in patients with reflux disease. *Gut* 2003; 52(4):479-85.

More Psychoeducation Needed For Bipolar Disorder Therapy

- **The Issue:** Researchers wanted to demonstrate the additive effects of psychotherapy and mood stabilizers in treating patients with bipolar disorder.
- **The Study:** The study involved 120 patients with bipolar I or II disorder. While continuing maintenance pharmacotherapy, patients were randomly assigned to 20 weekly nondirective group meetings (control group) or 21 weekly, 90-minute, group psychoeducation sessions that were aimed at increasing illness awareness, enhancing medication adherence, rapidly detecting symptoms of recurrence, and emphasizing the value of a regular schedule.
- **The Results:** Significantly fewer psychoeducation patients than control patients had affective recurrences during group therapy (38% vs. 60%) and after a two-year followup (67% vs. 92%). These results contribute to the body of data indicating that adding effective psychosocial therapies to somatic treatments should be standard for the care of bipolar patients.

Colom F, Vieta E, Martinez-Aran A, et al: A randomized trial on the efficacy of group psychoeducation in the prophylaxis of recurrences in bipolar patients whose disease is in remission. *Arch Gen Psychiatry* 2003; 60(4):402-7.

Long-Term Benefits of Laparoscopic Hernia Repair

- **The Issue:** The laparoscopic approach to inguinal hernia repair is associated with less pain and more rapid recovery than is traditional surgery.
- **The Study:** In the original study (1995/96), laparoscopic transabdominal preperitoneal (TAPP) mesh repair under general anesthesia was compared with Lichtenstein open mesh repair under local anesthesia. Of 400 patients who were included in the original analysis, 374 were alive after five years and data on 242 (122 TAPP patients and 120 open-surgery patients) were evaluated at a mean of 5.8 years by three surgeons who were not involved in the original study.
- **The Results:** Thirteen patients in the TAPP group and 52 in the open-surgery group suffered long-term complications, such as numbness or groin pain. Other complications, such as recurrence or infection, occurred infrequently in both groups. Overall results were good in both groups, but pain and paresthesias were significantly more common in the open-surgery group after five years. Those particular complications appear to be the major problems associated with inguinal hernia repair and make the laparoscopic approach the favoured technique. 

Douek M, Smith G, Oshowo A, et al: Prospective randomised controlled trial of laparoscopic versus open inguinal hernia mesh repair: Five year followup. *BMJ* 2003; 326(7397):1012-3.