
UPDATE

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

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Questioning Home BP Measurement?



Researchers in England evaluated the accuracy and acceptability of blood pressure (BP) measurement methods in 200 patients. They found that home BP measurements have the best combination of accuracy and acceptability, compared to physician-administered BP measurements.

Compared with ambulatory BP measurement, measurements taken by physicians were the least accurate. Patient self-measurements in the clinic had the highest sensitivity and specificity for predicting ambulatory pressure. Patient home measurements were nearly as accurate as self-measurements in the clinic.

In a second study, the same patients completed a questionnaire regarding acceptance of BP measurement methods. Overall, patients preferred home measurement, followed by measurements taken by nurses. Ambulatory BP measurement was the least preferred method because of sleep disturbance.

Little P, Barnett J, Barnsley L, et al: Comparison of agreement between different measures of blood pressure in primary care and daytime ambulatory blood pressure. *BMJ* 2002; Aug 3; 325:254-7.

Little P, Barnett J, Barnsley L, et al: Comparison of acceptability of and preferences for different methods of measuring blood pressure in primary care. *BMJ* 2002; Aug 3; 325:258-9.

Magnesium Can Help Asthmatics

Persuasive evidence from the multi-centre, randomized controlled trial published in the August issue of *Chest* suggests that magnesium sulfate improves pulmonary function in patients with acute severe asthma. Researchers took a random sample from 248 adults who presented to emergency departments with severe asthma forced expiratory volume 1 (FEV₁), ($\leq 30\%$ of predicted). Patients were randomized to receive either magnesium sulfate (2 g, intravenously) or placebo, in addition to standard therapy with inhaled bronchodilators and intravenous steroids.

The effect of magnesium was greatest in patients with the most severe asthma. Among those with an initial FEV₁ $< 20\%$ of predicted, the mean four-hour measurement rose to 34% in placebo recipients and 47% in magnesium recipients — a highly significant difference. Despite these spirometric outcomes, overall rates of hospital admission and scores on a dyspnea index were similar in the two groups. No major side effects were noted.

Noppen M: Magnesium treatment for asthma: Where do we stand? *Chest* 2002 Aug; 122:396-8.

Silverman RA, Osborn H, Runge J, et al: IV magnesium sulfate in the treatment of acute severe asthma: A multicenter randomized controlled trial. *Chest* 2002; 122(8):489-97.

Early Exposure Minimizes Pet Allergies



Early exposure to pets might reduce allergic sensitivity in children who are highly allergic to dogs and cats. In a prospective U.S. cohort study, researchers assessed 474 full-term infants at birth and annually for a mean of 6.7 years.

The likelihood of atopy or seroatopy at age six was 35% to 40% in children who were exposed to one or no pets during the first year of life, compared with 15% to 18% in children exposed to two or more pets (odds ratios, 0.23 for atopy and 0.33 for seroatopy after adjustment for potentially confounding variables). Asthma prevalence at

age six was similar in all groups, although boys exposed to two or more pets showed a insignificant trend toward reduced methacholine responsiveness.

Ownby DR, Johnson CC, Peterson EL, et al: Exposure to dogs and cats in the first year of life and risk of allergic sensitization at 6 to 7 years of age. *JAMA* 2002; 288(8):963-72.

Protection Against Restenosis

Results from the recently published Swiss Heart Study showed that homocysteine-lowering therapy reduced the six-month incidence of restenosis in patients who underwent coronary angioplasty. Now, the same investigators report results that include more patients and longer followup.

A total of 553 patients underwent percutaneous coronary angioplasty; about half the lesions were also stented. Patients then were randomized to receive six-month daily courses of homocysteine-lowering therapy (1 mg folic acid, 400 µg vitamin B₁₂, and 10 mg vitamin B₆) or placebo. At one year, a composite endpoint — which included revascularization, myocardial infarction and death — occurred less often with active treatment than with placebo (15% vs. 23%). The benefit was attributed to a lower rate of repeat revascularization of initial target lesions in the active-treatment group (10% vs. 16%).

Schnyder G, Roffi M, Flammer Y, et al: Effect of homocysteine-lowering therapy with folic acid, vitamin B₁₂, and vitamin B₆ on clinical outcome after percutaneous coronary intervention. The Swiss Heart Study: A randomized controlled trial. *JAMA* 2002; 288(8):973-9.

Antipsychotics Risky For Diabetic Schizophrenics

Compared with conventional antipsychotic agents, newer antipsychotics are associated with less severe extrapyramidal side effects. However, that benefit comes with a price — namely, weight gain, alterations in glucose metabolism, and increased lipid levels. British investigators evaluated the association between the use of antipsychotic drugs and risk for diabetes. Using the General Practice Research Database, they identified 19,637 patients who received diagnoses of, and treatment for, schizophrenia between June 1987 and September 2000.

In adjusted analyses, both olanzapine and conventional antipsychotics were associated with significantly increased risks for diabetes (odds ratios, 5.8 and 1.4, respectively), compared with no antipsychotic use. There was an insignificant trend toward increased risk with risperidone. Compared with conventional antipsychotic use, olanzapine again was associated with significantly increased risk for diabetes (odds ratio, 4.2), whereas risperidone was not.

Koro CE, Fedder DO, L'Italien GJ, et al: Assessment of independent effect of olanzapine and risperidone on risk of diabetes among patients with schizophrenia: Population based nested case-control study. *BMJ* 2002 Aug 3; 325:243-5.

Surprise — No Stitches!

Results from a new trial suggest that hand lacerations shorter than 2 cm would be better and less painfully treated with conservative measures rather than suturing.

For the first time, hand laceration treatment was evaluated in a randomized trial. Ninety-one patients who presented to an emergency department with fresh hand lacerations shorter than 2 cm (that normally would be sutured) received sutures or conservative treatment. In the suture group, lacerations were anesthetized, cleaned, closed with monofilament suture, and treated with antibiotic ointment and gauze dressing. In the conservative group, patients received tap-water irrigation, followed by antibiotic ointment and gauze dressing. Outcomes were assessed at 8 days to 10 days and at three months.

Mean treatment duration was significantly shorter with conservative management than with suturing (5 minutes vs. 19 minutes), and patient-reported pain during treatment was significantly less severe with conservative management.

Quinn J, Cummings S, Callaham M, et al: Suturing versus conservative management of lacerations of the hand: Randomised controlled trial. *BMJ* 2002; 325(7359):299.

Exercise Improves Fibromyalgia

Medical therapy for fibromyalgia, which includes analgesics, nonsteroidal anti-inflammatory drugs, and antidepressants, is only slightly effective. Exercise has been shown to be helpful in some patients, but studies have been underpowered and have included only hospitalized patients. British investigators performed this community-based trial to overcome the deficiencies of previous trials. A total of 136 adults (age range, 38 to 56) with fibromyalgia were randomized to attend either aerobic-exercise classes (mostly walking on treadmills and cycling on exercise bicycles) or relaxation and flexibility classes. All classes met twice weekly for 12 weeks, and patients were followed for a year.

At three months, significantly more exercise patients than relaxation patients rated themselves as “much better” or “very much better” (35% vs. 18%). At one year, 45% of the exercise group fulfilled the criteria for fibromyalgia compared with 66% of the relaxation group — a significant difference. Patients in the exercise group also had significantly greater reductions in tender-point counts from baseline to one year (4.2 vs. 2.0).

Richards SCM, Scott DL: Prescribed exercise in people with fibromyalgia: Parallel group randomized controlled trial. *BMJ* 2002; 325(7357):185.