Asthma: From children to adults

- **The Issue:** When their children are diagnosed with asthma, parents often wonder whether the symptoms that are present during childhood will carry on during the child's adult life.
- **The Study:** New Zealand researchers attempted to analyse this question by assembling a birth cohort of 613 children. Participants, or their parents, completed asthma-symptom questionnaires periodically from age three to 26. Beginning at age nine they were also tested for atopy, responsiveness to bronchodilators, and hyperresponsiveness to methacholine.
- **The Results:** At age 26, 27% of the group reported never wheezing, 21% reported transient wheezing (at one assessment only), 10% reported intermittent wheezing (at two or more non-consecutive assessments), and 15% reported persistent wheezing. Persistent wheezing was related significantly to female sex, dust-mite or cat allergies (at age 13), smoking (at age 21), and adult airway hyperresponsiveness. Wheezing onset at a young age, airway hyperresponsiveness, and dust-mite or cat allergies were found to be related significantly to relapse.

Sears MR, Greene JM, Willian AR, et al: A longitudinal, population-based, cohort study of childhood asthma followed to adulthood. N Engl J Med 2003; 349(15):1414-22.

TEE and predicting recurrent stroke

- **The Issue:** Closing a patent foramen ovale (PFO) in stroke patients using a percutaneous device is possible, and, despite lack of randomized data to document its benefit, many physicians recommend this procedure. Before assessing the value of intervention, it must first be known how well we can predict risk for adverse events in medically treated patients with PFO.
- **The Study:** Researchers studied transesophageal echocardiography (TEE) findings from 601 ischemic-stroke patients who had been enrolled in a double-blind study of acetylsalicylic acid (ASA) versus warfarin for preventing stroke recurrence and death. The mean age of the group was 59.
- **The Results:** During the two-year followup, there were 71 recurrent ischemic strokes and 21 deaths. Event rates did not differ significantly between patients with both ASA and PFO and patients with neither feature, both in the subgroup with cryptogenic stroke or the overall study group. However, this data fail to support the common conception that TEE findings can aid prediction of ischemic-stroke recurrence.

Homma S, Sacco RL, Di Tullio MR, et al: Atrial anatomy in non-cardioembolic stroke patients: Effect of medical therapy. J Am Coll Cardiol 2003; 42(6):1066-72.

Malaria and globalization

- **The Issue:** Malaria, which is the most important parasitic infection among humans, causes 1 to 3 million deaths worldwide each year. Its occurrence is rising in developed countries because of increased international travel and immigration. Diagnosis of malaria in the U.S. has been considered problematic, but is the treatment?
- **The Study:** Public health investigators recently reviewed all 88 malaria cases that were diagnosed between 1991 and 1999 at Cook County Hospital in Chicago. Only 83 of the patients' medical records were available. All had become infected while travelling or living in malaria-endemic areas (mostly in Africa or the Indian subcontinent), and very few had used chemoprophylaxis.
- **The Results:** Errors in antimalarial treatment were noted for 20 patients, 12 of which had a P. vivax infection and did not receive primaquine phosphate. Five patients each with P. vivax or P. falciparum infection received an inappropriate regimen, and two misdiagnosed patients received no documented therapy. Additionally, 12 of 29 patients who were prescribed primaquine did not undergo G6PD testing, and seven underwent unnecessary bone marrow biopsies when doctors failed to recognize the hematologic complications of malaria.These findings show the importance of expertise in malaria and other diseases now on the rise in developed countries due to globalization.

Singh K, Wester WC, Trenholme GM: Problems in the therapy for imported malaria in the United States. Arch Intern Med 2003; 163(17):2027-30.

Can refractory dyspnea be managed with morphine?

- **The Issue:** Many clinicians recognize that morphine is very valuable for treating severe dyspnea in patients with chronic obstructive pulmonary disease. However, it is not recommended universally. Results of a meta-analysis of several small, randomized trials support the benefit of opioids for dyspnea.
- **The Study:** Australian investigators conducted a larger, randomized, placebo-controlled, crossover trial in patients with severe refractory dyspnea. Researchers randomized 48 patients of mean age 76 who had dyspnea at rest despite receiving optimal medical therapy of oral, sustained-release morphine, 20 mg, for four days, followed by placebo for four days, or visa versa.
- **The Results:** Five of the patients dropped out during placebo treatment and an analysis of the 38 remaining patients indicated that patients reported significantly improved dyspnea scores during morphine treatment. Significantly fewer participants reported sleep disturbance from breathlessness during morphine treatment. This study was limited because it was short-term, and the researchers did not evaluate treatment safety and measured only dyspnea and sleep disturbance as primary outcomes. For now, we can say that morphine produces modest symptom improvement in severely dyspneic patients. Dx

Abernethy AP, Currow DC, Frith P, et al: Randomised, double blind, placebo controlled crossover trial of sustained release morphine for the management of refractory dyspnea. BMJ 2003; 327(7414):523-6.