

Data Support Need for Folic Acid

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unrelated to either a genetic abnormality or a syndrome; 2,401 mothers who gave birth to infants with noncardiac congenital malformations and a known chromosomal defect served as controls. Diabetic mothers, those who had used folate antagonists, and mothers of babies with neural tube defects, limb reduction, hypospadias, or oral cleft palate were excluded from both groups.

Of the Dutch mothers included in the study, 62% were regular users of folic acid supplements periconceptually; 38% were

not. The incidence of any congenital heart defect was 28.5% in nonusers compared with 23.2% in users, for a highly significant 18.5% relative risk reduction in the women who took folic acid supplements.

After investigators adjusted in a multivariate model for potential confounders including the baby's year of birth, maternal age, smoking and alcohol consumption during pregnancy, and maternal body mass index and education level, the estimated relative risk reduction associated

with maternal periconceptual folic acid supplements remained at 18%, since the prevalence of potential confounders in cases and controls was similar.

There was a particularly impressive 38% reduction in the adjusted risk of isolated septal heart defects in the folic acid group. Ventricular septal defects—the most common type of congenital heart defects—were reduced by 31%, while isolated atrial septal defects were decreased by 46%. There were no significant differences between folic acid supplement users and nonusers in the incidence of right- or left-sided outflow obstruction or complex heart defects.

However, the 23% relative reduction in

the risk of conotruncal heart defects among folic acid users might well have achieved statistical significance with a larger patient sample size, according to Dr. van Beynum.

Although a randomized placebo-controlled trial is acknowledged to be the highest form of scientific evidence, a definitive randomized trial of periconceptual folic acid supplementation for the prevention of congenital heart defects would be ethically impossible because of the treatment's established effectiveness in preventing neural tube defects. Data from EUROCAT and other comprehensive registries will have to do, she noted. ■

Hospitalizations Soar for CHD in Adult Patients

NEW ORLEANS — The annual number of hospitalizations for adults with congenital heart disease climbed by 71% in the United States between 1998 and 2005, far outstripping the 12% overall increase in hospital admissions among the general adult population.

Total hospital charges for adults with congenital heart disease (ACHD) skyrocketed from \$1.1 billion in 1998 to \$3.7 billion in 2005, a disproportionate increase relative to trends in the broader adult population. Indeed, this 229% jump in total charges was more than twice the rate of increase for all adult hospitalizations nationally during the same period, Dr. Alexander R. Opatowsky noted at the annual scientific sessions of the American Heart Association.

His analysis of data from the Hospital Cost and Utilization Project's Nationwide Inpatient Survey, the country's largest all-payer hospital discharge database, provided a first-ever look at national hospitalization trends for the growing ACHD population.

Hospitalizations for complex forms of ACHD rose by 58% during the study period, while admissions for simple diagnoses climbed by 129%, driven largely by a dramatic increase in admissions for patients with secundum atrial septal defect or patent foramen ovale, said Dr. Opatowsky of the University of Pennsylvania, Philadelphia.

Surgical as well as medical admissions increased, both in patients with simple as well as in those with complex forms of ACHD. Patients with simple forms of ACHD were slightly more likely than those with complex diagnoses to be admitted for surgery, mainly to address bicuspid aortic valves and aortic insufficiency, he continued.

Hospital admissions for electrophysiological diagnosis or procedures in ACHD patients increased by 98% during the study period. The annual number of hospitalizations for ACHD patients aged 55 or older increased by 78% between 1998 and 2005. The increase was 63% among 18- to 34-year-olds with ACHD and 67% in 35- to 54-year-olds.

"We now have an older, sicker population requiring more repeat admissions," the cardiologist said.

—Bruce Jancin

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