



Clinical Digest

NEURODEVELOPMENT

Older Father Raises Risk of Autism

The older the father, the higher the risk that his child will have autism, according to a study by researchers from Mount Sinai School of Medicine, Columbia University, and New York State Psychiatric Institute, all in New York, NY; King's College, London, England; and Chaim Sheba Medical Center, Telhashomer; Bar Ilan University, Ramat-Gan; Hebrew University, Jerusalem; and Israel Defense Forces, Tel Aviv, all in Israel.

The researchers analyzed data from 318,506 Jewish adults who were born in Israel during six consecutive years in the 1980s and assessed by the Israeli draft board for military service at age 17. (Assessment included a review of the person's clinical history.) Both paternal and maternal ages were identified in a smaller subset of 132,271 adults from this group.

In the subset, the risk of autism spectrum disorder (ASD) was 8.3 cases per 10,000 persons (110 cases). Most of the cohort diagnosed with ASD had autism. Children of men aged 40 or older were nearly six times more likely to have ASD, compared with children of men younger than 30. Fathers aged 20 or younger had no children with ASD.

After controlling for year of birth, socioeconomic status, and maternal age, the researchers found that, with each 10-year increase in paternal age, the risk of having a child born with ASD more than doubled. No association was found between advancing maternal age and ASD.

The researchers note that a link between paternal age and ASD can be traced back 30 years, and studies of

ASD have reported paternal age frequencies among other variables. They believe theirs, however, is the first epidemiologic study using an entire cohort and focusing on the paternal age hypothesis.

Source: *Arch Gen Psychiatry*. 2006;63:1026-1032.

INFECTIOUS DISEASES

Comparing Infection Risk of Intravascular Devices

All intravascular devices (IVDs) pose a risk of bloodstream infection (BSI), say researchers from University of Wisconsin Hospital and Clinics, Madison who studied data from 200 prospective studies. They also found that determining which IVDs are associated with the greatest BSI risk depends somewhat on how you calculate that risk—as BSIs per 100 devices (%) or as BSIs per 1,000 IVD days.

Using the first method, the researchers found that the highest rates of infection occurred with percutaneous left ventricular assist devices (26%); surgically implanted, cuffed and tunneled, all-purpose central venous catheters (CVCs) (23%); and cuffed and tunneled hemodialysis catheters (21%). The lowest rates occurred with pulmonary artery catheters (1.5%), minocycline-rifampin-impregnated CVCs (1%), arterial catheters (0.8%), midline catheters (0.4%), and peripheral intravenous catheters (0.1%).

When the researchers calculated BSI risk using the second method (which they felt was a more meaningful expression of risk), the highest risk rates occurred with peripheral intravenous catheters placed by surgical cutdown (9 per 1,000 IVD days), peripheral steel needles (8.6), and

intra-aortic balloon pumps (7.3). The lowest rates occurred with minocycline-rifampin-impregnated CVCs (1.2), outpatient peripherally inserted CVCs (1), peripheral intravenous catheters (0.5), peripheral central venous subcutaneous ports (0.1), and central venous ports (0.1).

The difference between the two methods was perhaps most notable with regard to the risks associated with cuffed and tunneled, all-purpose CVCs (which are used primarily for long-term access in immunocompromised patients) versus short-term, nonmedicated, noncuffed, and nontunneled CVCs (which are used most often in immunocompromised patients in the intensive care unit [ICU] setting). By the first method of BSI risk calculation, the gap between the two types of CVCs was vast: 22.5% versus 4.4%, respectively. Using the second method not only closed this gap but went so far as to reverse the trend—there were 1.6 BSIs per 1,000 IVD days for cuffed and tunneled CVCs versus 2.7 for short-term, nonmedicated, noncuffed and nontunneled CVCs.

The study findings dispute some commonly held beliefs. For instance, since the CDC does not advocate surveillance for BSIs related to arterial catheters, clinicians do not regularly obtain cultures from arterial catheters when line sepsis is suspected. This study, however, showed the BSI risk for arterial catheters was 1.7 per 1,000 IVD days—which the researchers attribute to the fact that these catheters are among the most heavily manipulated IVDs in the ICU and the operating room.

The researchers caution that their results must be interpreted carefully. For long-term central venous access, for example, the data show that surgi-

cally implanted central and peripheral venous ports pose less risk than cuffed and tunneled catheters (0.1 versus 1.6 BSIs per 1,000 IVD days, respectively). They point out, however, that the risks associated with subcutaneous central ports rise considerably when used for frequent, repeated access or continuous access for many days, and, as such, a cuffed and tunneled catheter is preferable in these situations.

They also note that novel devices, such as CVCs with anti-infective surfaces, are simpler to tunnel than traditional, noncuffed CVCs and are “at least as effective” at reducing BSI risk. So, while tunneling standard CVCs has fallen out of favor, the newer types could bring back tunneling as a routine practice.

Source: *Mayo Clin Proc.* 2006;81:1159–1171.

DIABETES CARE

The Problem with Nighttime Snacking

Nighttime snacking may be a dangerous and widespread habit for patients with diabetes, say researchers from the University of Washington School of Medicine in Seattle. They found that nearly 10% of 714 patients with types 1 and 2 diabetes reported eating more than 25% of their daily food intake after evening meals.

The patients who snacked at night were less likely than those who didn't to adhere to suggested diet, exercise, and glucose monitoring regimens. In fact, night eating patterns were significantly associated with obesity, elevated glycosylated hemoglobin levels, and a number of disease complications. The nighttime snackers also were more likely than other patients to eat in response to negative emotions and reported significantly more depression, childhood maltreatment, and “maladaptive interpersonal interactions.”

The researchers suggest assessing these patients for related eating disorders, depression, and anxiety symptoms; teaching them cognitive and behavioral strategies to address eating patterns and sleep disturbances; considering pharmacotherapy with selective serotonin reuptake inhibitors and sleep aids; and providing education on the link between self-care, emotions, and diabetes to help them understand their eating patterns.

Source: *Diabetes Care.* 2006;29:1800–1804.

ONCOLOGY

Second Primary Tumors and Nasopharyngeal Carcinoma

Second primary tumors (SPTs), either spontaneous or caused by anticancer treatment, are poorly understood, say researchers from Cancer Hospital of Fudan University, Shanghai, China and National University Hospital, Singapore. Consequently, they conducted a retrospective study to evaluate risk factors in patients with undifferentiated nasopharyngeal carcinoma after the patients received definitive external beam radiation treatment.

The researchers followed 326 Chinese patients for up to eight years. Of those patients, 17 developed SPTs, with a five-year cumulative incidence of 5.8%. Eleven of the SPTs occurred in the upper aerodigestive tract. Among the 14 SPTs that developed within five years after radiotherapy, only three occurred within the radiation field. By contrast, all three SPTs that occurred more than five years after radiotherapy were “in-field.” The researchers say this difference suggests that radiotherapy increased the incidence of SPTs within the radiation field five years after treatment—a finding that concurs with previously accepted parameters.

Age was the only independent risk factor for developing SPTs after radio-

therapy: An age of 50 years or older raised the risk by 37%. There was a trend toward increased risk in men or in patients who had received radiotherapy combined with chemotherapy.

Source: *Cancer.* 2006;107:1287–1293.

MENTAL HEALTH

A Simple Assessment Tool for Potential Suicides

Four questions can help identify which patients can be discharged safely with an outpatient referral after attempts at suicide or other forms of self-harm according to a new study. Unfortunately, the study findings suggest that such patients comprise only about one quarter of those admitted in this situation.

Researchers from the University of Manchester and the Manchester Royal Infirmary, both in Manchester, England, analyzed data on 9,086 patients from five emergency departments who inflicted harm on themselves between 1997 and 2001. The data included 1,538 patients who repeated attempts at self-harm within six months, 22 of whom died by suicide within six months.

With recursive partitioning, the investigators developed the Manchester Self-Harm Rule, which classifies four simple clinical correlates as indicating moderate or high risk for self-harm or suicide. The correlates include any history of self-harm, previous psychiatric treatment, benzodiazepine use in this attempt, and current psychiatric treatment. The rule successfully identified 94% of all repeaters in the sample and predicted all suicides within the six-month period, as well as 97% of all patients who committed suicide over the entire study period. The rule identified only 25% of the total number of patients as nonrepeaters. ●

Source: *Ann Emerg Med.* 2006;48:459–466.