Toxoplasma Screen Urged 3 Times in Pregnancy

Only serologic process can identify infected women, newborns in time to prevent neurologic sequelae.

BY MICHELE G. SULLIVAN
Mid-Atlantic Bureau

All pregnant women should undergo screening for *Toxoplasma gondii* infection once each trimester, and all newborns should be screened for congenital toxoplasmosis, Kenneth M. Boyer, M.D., and colleagues have recommended.

Even a thorough history fails to identify about half of pregnant women who have an acute infection, according to Dr. Boyer of Rush University Medical Center, Chicago. Only a serologic screening process would identify all infected women and newborns in time to administer the treatment necessary to prevent neurologic sequelae of the illness in these infants (Am. J. Obstet. Gynecol. 2005;192:564-71).

"It is difficult to imagine that any informed mother or father would choose not to include this screening in their prenatal care, considering that almost all untreated infants who are infected ... in utero experience ophthalmologic and/or neurologic disease, and that treatment of the fetus and infant clearly reduces these risks," they said.

The researchers retrospectively analyzed the medical records of 131 infants and children with congenital toxoplasmosis who were referred to the Chicago Collaborative Treatment Trial. The study focused on demographic data and the mothers' understanding of factors surrounding their exposure to the parasite.

Women were questioned about their exposure during pregnancy to cats, cat litter, gardening, and sandboxes. They also were questioned about their consumption of raw or undercooked meat, eggs, or unpasteurized milk; the nature and timing of their exposure; and any illness during pregnancy that was compatible with infection, especially prolonged fever, night sweats, myalgia, headache, and lymphadenopathy.

Most of the women (75%) could recall a conceivable exposure, but only 39% specifically recalled exposure to cat litter or raw meat dishes. One-quarter of the women could not identify any possible exposure to cats or raw or undercooked foods.

More than half (52%) could not recall an infectious illness of any kind during pregnancy. Almost half (48%) noted an illness that might have been caused by the parasite; 27% recalled fever or night sweats and 23% recalled lymphadenopathy.

Ten of the women had serologic testing for toxoplasmosis before delivery. Three of those were living in France at the time, where such testing is part of routine obstetric care. Each of the remaining seven women had compatible illness or identified risk factors.

One woman was tested because an ultrasound noted ascites in her twin fetuses. Three were tested because their physicians were looking for the cause of the illness, and three were tested as part of routine obstetric care.

Since only three women were tested as part of an investigation of an infectious illness, it is apparent that many physicians do not consider toxoplasmosis as a possible cause of these nonspecific symptoms during pregnancy, the authors noted. "This observation points out the importance of greater recognition by obstetricians of the pediatric implications of maternal infection and infectious symptoms during pregnancy."

The only way to prevent or detect a higher proportion of infants with congenital infection is by systematic serologic screening, they concluded, adding that cost analyses should be performed before any decision making occurs. However, the potentially devastating lifelong effects of congenital toxoplasmosis, and the recognized benefits of early identification and treatment, make a compelling case for systematic screening, the researchers said.

Additionally, they noted, congenital toxoplasmosis is more common than many genetic and metabolic diseases, such as phenylketonuria, congenital hypothyroidism, and congenital adrenal hyperplasia, for which mandatory neonatal screening already exists.

The American College of Obstetricians and Gynecologists recommends routine toxoplasmosis screening only in HIV-positive pregnant women. Routine screening also may be justifiable in women who are cat owners, the college says.

ACOG does not recommend routine screening for every pregnant woman, because there is a low incidence of seropositivity in the United States. Countries such as France and Austria, which have mandated screening, have high rates of seropositivity among their populations.

Serologic screening in pregnant women may yield equivocal results because IgM antibodies to the parasite can persist for long periods, according to ACOG. ■

Report Reveals Public Support For Reproductive Genetic Testing

BY KATE JOHNSON
Montreal Bureau

About two-thirds of Americans support the use of genetic testing of embryos during in vitro fertilization to avoid the birth of a child with a fatal disease, but fewer than 30% support its hypothetical use for selecting intelligence or strength, according to a report from the Genetics and Public Policy Center in Washington.

A "majority of Americans think that testing for health-related purposes is an appropriate use of reproductive genetic testing, but only a minority support its use for trait selection," noted the report entitled "Reproductive Genetic Testing: What America Thinks."

The report touches on the more textured differences and similarities in opinion concerning these issues among the American public. It describes the political debate over reproductive genetic testing as framed by two polarized views, whereas the views of most Americans "are more nuanced and elastic, reflecting the tensions among hopes, values, and personal experience."

"Public debate and media coverage of reproductive genetic technologies hide a surprising level of concordance among Americans for using genetic testing to identify risks of disease," observed Kathy Hudson, director of the center, in a written statement.

The research included 21 focus groups, 62 in-depth interviews, surveys of more than 6,000 people, and both in-person and online town hall meetings.

The study authors noted that respondents' awareness about preimplantation genetic diagnosis (PGD) was very low.

"While most participants had heard of genetic testing at some level, the pace of technology in this field rapidly has outstripped public awareness," the report noted. When asked whether they had heard of various technologies before that day, only 40% of participants had heard of PGD. A total of 83% said they were aware of prenatal testing, 90% had heard of in vitro fertilization (IVF), and 97% had heard of cloning.

When asked about the statement "Reproductive genetic technology will inevitably lead to genetic enhancement and designer babies," 75% of participants said they agreed.

Yet, the participants were clear that it is not the technologies themselves that they fear, but rather that "unrestrained human selfishness and vanity will drive people to use reproductive genetic testing inappropriately," noted the authors. "They believed that the technology is being developed for good purposes, but human vices will result in consumer demand for capricious uses."

The study reports that 84% of participants were concerned about reproductive technologies being unregulated; however, 70% also were concerned "about government regulators invading private reproductive decisions."

A companion report entitled "Reproductive Genetic Testing: Issues and Options for Policymakers" explores various options for overseeing the use, cost, access, and safety of reproductive genetic testing. ■

Both reports are available at www.dnapolicy.org.

MRI Spots Acute Abdominal, Pelvic Pain With No Fetal Radiation Risk

BY MICHELE G. SULLIVAN
Mid-Atlantic Bureau

Magnetic resonance imaging is an effective means of diagnosing acute abdominal and pelvic pain in pregnant patients, and it avoids fetal exposure to the radiation of a computerized axial tomography exam, Katherine Birchard, M.D., and her colleagues reported.

Although there have been no documented cases of MRI causing adverse effects to the fetus, MRI scans should be used in pregnant patients only when the benefits clearly outweigh the risks, the researchers said. "However, we should stress that the single greatest factor in morbidity and mortality of the pregnant patient is delay in diagnosis," reported Dr. Birchard of the University of North Carolina, and associates (AJR Am. J. Roentgenol. 2005;184:452-8).

The researchers retrospectively analyzed all MRI studies of 29 pregnant patients referred to their facility from 2002 to 2004 for evaluation of acute abdominal or pelvic pain. The patients' mean age was 25 years (18-35 years), and mean gestational age was 23 weeks (10-36 weeks). Most of the patients (22) did not have gadolinium administered.

Every patient underwent fetal sonography before any other imaging. Six also underwent complete abdominal sonographic examination before the MRI, which was the imaging exam used in 23 patients.

MRI identified appendiceal abscess (1 case), appendicitis (2 cases), intraabdominal and rectus muscle abscess (1), pancreatitis (1), and ulcerative colitis (1). MRI also showed Crohn's disease with diffuse peritoneal inflammation (1), intussusception (1), bilateral adrenal hemorrhage (1), pyelonephritis (2), hydronephrosis (1), uterine fibroid degeneration (2), degeneration and torsion of a subserosal uterine fibroid (1), simple ovarian cysts (1), and ovarian torsion (1). The other 12 examinations were normal.

The MRI results were congruent with follow-up medical records in 28 of the 29 patients and accurately described the disease process in all except one patient. This patient was at 18 weeks' gestation and complained of acute right lower quadrant pain. The MRI identified multiple ovarian cysts, but a laparoscopy 1 month later showed a torsed right ovary with multiple cysts. When examined retrospectively, the MRI did not show this finding.

"We believe this is due to the fact that the ovary was largely cystic, and therefore, edematous tissue was not seen," the researchers said. They cautioned that ovarian torsion occurs more commonly during pregnancy, and this condition should be considered during every evaluation of an adnexal mass in a pregnant patient. ■