Cardiac Abnormalities May Appear Late in KD

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SAN DIEGO — Cardiac abnormalities in patients with Kawasaki disease may appear well after their short-term treatment phase, even in those with no previous evidence of cardiac involvement, results from a follow-up study show.

The results "further support a need for long-term follow-up of all patients with Kawasaki disease," Rosie Scuccimarri, M.D., reported at an international Kawasaki disease symposium. "Patients who have had normal echoes at 8 weeks should also have echocardiograms at least every 5 years."

For the study, she and her associates contacted 221 patients who had been admitted to Montreal Children's Hospital with a diagnosis of Kawasaki disease during January 1985 to December 1999 and who were treated in the acute phase of their disease with intravenous immunoglobulin and low-dose aspirin. The aim was to conduct late follow-up echocardiographic evaluations, and of the 221 patients contacted, 159 participated in the study.

Patients identified as having echocardiographic abnormalities within 8 weeks of Kawasaki disease diagnosis or during later follow-up visits (38) were matched to those in which no prior abnormalities were detected (121). The mean age of disease diagnosis was 3 years, and the mean age at study visit was 11 years.

Of the 38 patients in whom abnormalities had been detected previously, 12 had coronary artery lesions, which translated into an incidence of 7.5% in the entire study group.

A coronary vessel was defined as abnormal if its diameter was greater than 3 mm in a child younger than 3 years, greater than 3.5 mm in a child aged 3-5 years, greater than 4 mm in a child aged 5-11 years, and greater than 5 mm in a child older than 11 years.

All 38 patients with abnormalities had complete resolution of their original abnormalities, but 8 (21%) had developed new pathology on long-term follow-up.

The investigators also observed that 7 of the 121 patients (6%) with normal echocardiograms on early follow-up had abnormal results on late follow-up, including one with a new coronary artery lesion.

"There was a significant interest by patients to participate [in the study]," noted Dr. Scuccimarri, a pediatric rheumatologist at McGill University Health Center, Montreal. "We were lucky enough to have patients who came [from] as far as Hong Kong, Western Canada, and the United States at their own expense."

In another part of the study, a subgroup of 35 patients underwent a stress test using technetium-99m sestamibi (stress MIBI) with continuous ECG monitoring: 18 who had echocardiographic abnormalities at early or late follow-up and 17 who had no such abnormalities.

Among the 18 patients with abnormalities at early or late follow-up, 1 had an abnormal stress ECG, she said at the meeting, which was sponsored by the American Heart Association. Among those without evidence of abnormalities, one had an abnormal ECG, and one had an abnormal stress MIBI. She concluded that stress-MIBI testing and long-term follow-up "needs to be evaluated further." ■

Surveillance Report: No Increase in Kawasaki Disease

SAN DIEGO — Preliminary results from an ongoing surveillance of Kawasaki disease in the United States suggest that no unusual increases in cases occurred between 1998 and 2003, Ryan Maddox reported in a poster session at an international Kawasaki disease symposium.

"For the most part, the findings were consistent with those of previous studies and in line with what we'd expect," Mr. Maddox, an epidemiologist with the division of viral and rickettsial diseases at the Centers for Disease Control and Prevention, Atlanta, told Rheumatology News. "We're not seeing more cases reported, which is a good sign."

The investigators also observed that 23.2% of patients had illness onset in February or March, while 12.4% had onset in August or September.

He was quick to point out that while the study involved patients in 29 states, 80% of the data came from clinicians in just four states: California, Illinois, Michigan, and Virginia. "Obviously, we can't make a claim about [nationwide] incidence based on that," Mr. Maddox said, but added that a new case reporting form was available online (www.cdc.gov\ncidod\diseases\kawasaki\index.htm), which will make reporting easier. For the study, he and his associates analyzed data from patients younger than 18 years who met the CDC's Kawasaki disease case definition and had illness onset between 1998 and 2003. This time period was chosen because it picked up where previous studies ended.

Between 1998 and 2003, 1,854 cases of Kawasaki disease were reported, which represents an estimated 10% of Kawasaki disease patients nationwide. Most patients (79.9%) were younger than 5 years, and 59.8% were boys. Overall, 57.7% were white, 19% were black, 17.7% were Asian or Pacific Islander, and the rest had other ethnic backgrounds.

Nearly all the patients (99%) were hospitalized for their disease, and 97.8% received intravenous immunoglobulin. Coronary artery abnormalities were reported in 14.7% of patients, which is higher than the 10.3% reported in a surveillance study conducted between 1991 and 1993. Reasons for this increase may have to do with improved ways to detect coronary artery abnormalities since the earlier study.

"It appears that [the prevalence of] aneurysms remained fairly constant over this period," Mr. Maddox said. "However, [coronary] dilatations have been increasing. That's something that can be picked up through echo testing, which may be better at detecting these dilatations [than before.] That could account for at least some of the increase we're seeing."

The investigators also observed that 23.2% of patients had illness onset in February or March, while 12.4% had onset in August or September. "Some people suggest [Kawasaki disease] is a virus," said Mr. Maddox, "It could be this disease occurs because the virus is more prevalent during February and March. However, this disease does occur year-round." ■

Clinical Measures of KD May Vary by Patient Ethnicity

SAN DIEGO — African American children with Kawasaki disease are more likely to have higher fevers in the hospital, higher erythrocyte sedimentation rates, and higher C-reactive protein levels than their white counterparts, Ian C. Balfour, M.D., reported in a poster session at an international Kawasaki disease symposium sponsored by the American Heart Association.

"At this time, I can't say there is a take-home message," Dr. Balfour, a pediatric cardiologist with Saint Louis University, said in an interview. "I think we need further study to determine why certain patients have higher erythrocyte sedimentation rates and higher levels of C-reactive protein."

For the study, which he called the first of its kind, Dr. Balfour and his associates reviewed the records of 124 children admitted to Cardinal Glennon Children's Hospital in St. Louis between January 1995 and December 31, 2002, with a diagnosis of Kawasaki disease. They analyzed multiple clinical parameters in relation to ethnic origin.

Of the 124 children, 76 (61%) were white, 38 (31%) were African American, 7 (6%) were Asian, and 3 (2%) were from other ethnic groups. Age at presentation ranged from 2 to 11 years. Because the number of Asian patients and those from other ethnicities was so small, Dr. Balfour only discussed clinical differences between African American and white children.

More black patients presented with Kawasaki disease before age 6 years than white patients (97.4% vs. 76.3%), but the difference was not statistically significant.

African American children had significantly higher mean fever upon hospital admission, compared with white children (102.2° F vs. 101.3° F). The black children also had significantly higher mean erythrocyte sedimentation rates (72.9 mm/hr vs. 55.9 mm/hr) and C-reactive protein levels (22.3 mg/L vs. 6.9 mg/L) than their white counterparts.

Dr. Balfour noted that coronary artery involvement was similar between the two groups. ■

No Evidence of Accelerated Carotid Disease Seen in Kawasaki Survivors

SAN DIEGO — Long-term survivors of Kawasaki disease with or without a history of coronary aneurysms had no evidence of accelerated carotid atherosclerosis, results from a controlled, multicenter study have shown.

"Discussion of these findings with patients and their families may be helpful in preventing unwarranted psychological effects," Dorota Gruber said at an international Kawasaki disease symposium. "The need for unusual or frequent serum screenings has not been established."

For the study, led by Rubin S. Cooper, M.D., director of pediatric cardiology at New York–Presbyterian Hospital, New York, investigators assessed 28 Kawasaki disease patients at least 5 years removed from the acute phase of their disease and compared them with 27 age- and gender-matched controls.

Methods included taking a medical, family, dietary, and smoking history; doing a clinical examination of Kawasaki disease; performing a thoracic echocardiogram; conducting a cardiac ultrasound; and assessing serum markers of atherosclerotic risk.

There were no differences between the two groups in terms of age, gender, race, body mass index, blood pressure, cigarette smoking, family history, and diet, reported Ms. Gruber, a clinical research coordinator at the hospital.

Traditional serum markers for atherosclerotic risk such as LDL and HDL levels were also similar between the two groups, she said at the symposium, sponsored by the American Heart Association.

Males in the Kawasaki disease group had significantly higher levels of cystatin C and apolipoprotein B, compared with males in the control group, but these levels were still within the normal range. Males in the Kawasaki disease group also had a higher median body mass index than males in the control group (24 kg/m^2 vs. 21 kg/m^2, respectively).

Investigators observed no differences in carotid intima-medial thickness or ventricular size and function between cases and controls. ■