

Heart Defect Screening Indicated in Turner's

BY MIRIAM E. TUCKER

NEW YORK — Partial anomalous pulmonary venous return was detected by cardiac magnetic resonance imaging in 7 of 39 adolescent and young adult women with Turner's syndrome whose charts were retrospectively evaluated.

The finding suggests that careful screening for the partial anomalous pulmonary venous return (PAPVR) heart defect is indicated in the Turner's syndrome population, along with appropriate cardiac referral and management, Dr. Iris Gutmark-Little said at the joint meeting of the Lawson Wilkins Pediatric Endocrine Society/European Society for Pediatric Endocrinology.

Results from the study also suggest that cardiac magnetic resonance (CMR) imaging is a more sensitive modality than echocardiography for the detection of PAPVR in patients with Turner's syndrome, said Dr. Gutmark-Little of Cincinnati Children's Hospital Medical Center.

The 39 patients were the first to be screened with CMR after Cincinnati Children's began using the modality routinely in all Turner's syndrome patients during the early teen years. The patients also underwent echocardiographic evaluation.

A total of seven patients (18%) were found to have PAPVR by cardiac magnetic resonance imaging, six of them following a normal echocardiogram. Aberrant drainage of the right upper



A four-chamber MRI shows a dilated right ventricle as a result of a right-sided PAPVR lesion in an adolescent female Turner's syndrome patient.

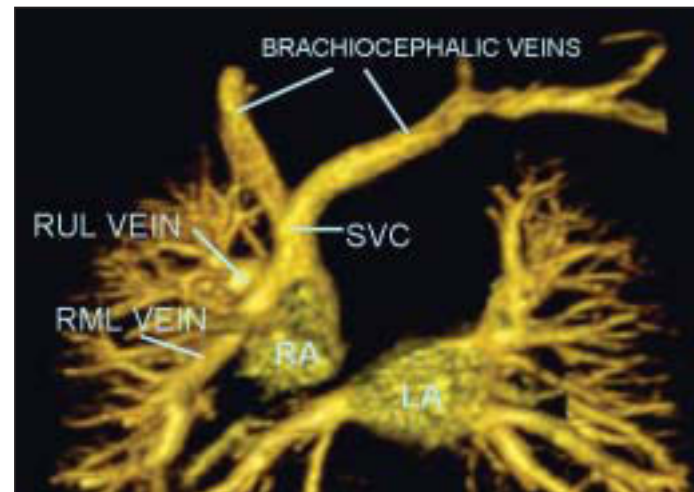
pulmonary veins was seen in five patients, of whom three also had involvement of at least a portion of the right middle lobe vein. The other two had the defect in the left upper pulmonary vein.

The 18% PAPVR prevalence seen here is similar to the 13% found in a previous study of adult Turner's syndrome patients (*Circulation* 2004;110:1694-700), she noted.

In one patient, PAPVR was associated with clinically significant enlargement of the right ventricle, with a pulmonary-to-

systemic blood flow ratio (Qp:Qs) of 1.9:1. She required surgical repair. The other six patients had Qp:Qs ratios ranging from 1.24:1 to 1.62:1 (mean, 1.5:1), and did not require intervention.

There were no differences in age, height, karyotype, or right ventricular ejection fraction between the 7 patients with PAPVR and the 32 without, nor did the two groups differ in peripheral lymphedema, neck webbing, renal malformations, coarctation, or bicuspid aortic valve. This finding differs from previous studies that have linked some of these



A three-dimensional MRI shows a right-sided PAPVR lesion in an adolescent female Turner's syndrome patient. The right middle- and right upper-lobe anomalous pulmonary veins are seen draining into the superior vena cava. This patient had a nearly 2:1 left-to-right shunt, resulting in right ventricular dilatation. This necessitated surgical repair of her PAPVR.

features to PAPVR in Turner's syndrome patients. It's possible that the small sample size may have missed the associations, Dr. Gutmark-Little commented.

After her presentation, an audience member asked Dr. Gutmark-Little if she would recommend cardiac magnetic resonance imaging in asymptomatic Turner's syndrome patients. She replied, "Not necessarily primarily for detecting PAPVR, but I think it's important to use CMR during the teen years in order to look at aortic size and function."

Dr. Gutmark-Little stated that she had no financial disclosures. ■

Lung Cancer Is Deadlier in Women Treated With HT

BY JANE SALODOF MACNEIL

Hormone therapy in postmenopausal women increases the risk of death from lung cancer, according to a newly published post hoc analysis of the large and influential placebo-controlled Women's Health Initiative trial.

Lung cancer incidence was not higher in women who were treated with estrogen plus progesterone, but they were significantly more likely to die of the disease, the investigators reported. The mortality effect was most pronounced in smokers and former smokers. No difference was seen in mortality from small cell lung cancer.

"Our findings should be considered before the initiation or continuation of combined hormone therapy in postmenopausal women, especially those with a high risk of lung cancer, such as current smokers or long-term past smokers," concluded the investigators, led by Dr. Rowan T. Chlebowski of Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, Torrance, Calif. (*Lancet* 2009 Sept. 19 [doi:10.1016/S0140-6736(09)61526-9]).

In an accompanying comment, Dr. Apar Kishor Ganti of the University of Nebraska Medical Center in Omaha said that hormone therapy (HT) should probably be avoided in women at high risk for lung cancer—and maybe should not be used at all (*Lancet* 2009 Sept. 19 [doi:10.1016/S0140-6736(09)61571-3]).



"These results, along with the findings showing no protection against coronary heart disease, seriously question whether [hormone therapy] has any role in medicine today. It is difficult to presume that the benefits of routine use of such therapy for menopausal symptoms outweigh the increased risks of mortality, especially in the absence of improvement in the quality of life," wrote Dr. Ganti.

The Women's Health Initiative trial randomized 16,608 mostly healthy postmenopausal women (8,506 to combined hormone therapy and 8,102 to placebo) at 40 centers in the United States from 1993 to 1998.

The trial was halted after an average follow-up of 5.6 years when investigators determined that higher risks of cardiovascular disease, coronary heart disease, stroke, venous thromboembolism, and breast cancer outweighed the benefits from lower risks for fractures and colorectal cancers among women in the combined HT arm.

Lung cancer was not a predefined study outcome, but the investigators became suspicious when deaths from other cancers were not sufficient to explain excess mortality in women treated with HT.

The subsequent intent-to-treat analysis, performed at an average follow-up of 7.9 years, found that more lung cancer occurred in the combined HT arm (109 cases) than in women treated with placebo (85 cases), with non-small cell lung cancer (NSCLC) occurring

in 96 and 72 women, respectively, in the two groups.

These differences were not statistically significant, but the curves began to separate after 5 years, with more lung cancer (particularly NSCLC) occurring after that time in women who were given combined HT than in those who had been on placebo.

Among the women who were diagnosed with lung cancer, 78 deaths occurred during follow-up in the combined HT arm vs. 49 in the placebo group, a difference that was statistically significant, with an incidence per year of 0.12% and 0.08%, respectively (hazard ratio, 1.50), the investigators reported.

NSCLC was the cause in 62 of these deaths in the HT arm and in 31 in the placebo group, with an incidence per year of 0.09% vs. 0.05%, respectively (HR, 1.87).

The investigators also reported that an exploratory analysis showed shorter median survival after lung cancer diagnosis in the combined HT population (9.4 months vs. 16.1 months in their control group counterparts), and significantly higher mortality (70% vs. 54%) at 4 years after diagnosis (HR, 1.59).

The Women's Health Initiative was supported by the National Heart, Blood, and Lung Institute of the National Institutes of Health.

Dr. Chlebowski disclosed advisory and consulting relationships with various drug companies. Dr. Ganti declared no conflicts of interest. Dr. Chlebowski presented results from this study at the annual meeting of the American Society of Clinical Oncology earlier this year. ■

To see a video interview, go to www.youtube.com/user/ClinicalEndoNews and search for "Chlebowski."