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PPCM Mortality Unusually Low in Kaiser Study

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New Orleans — Women with peripartum cardiomyopathy in a contemporary Southern California series had a markedly lower mortality than in previously reported studies, Dr. Somjot S. Brar said at the annual scientific session of the American College of Cardiology.

The overall incidence of peripartum cardiomyopathy (PPCM) was one case per 4,025 live births in this study of nearly 250,000 deliveries in the Southern California Kaiser Permanente health care system in 2000-2005. But there was a substantial racial variation.

The incidence of PPCM was highest in black women, at one case per 1,421 live births. This rate was 2.9-fold greater than in whites, 7-fold greater than in Hispanics, and twice that in Asians, according to Dr. Brar of Kaiser Permanente Medical Center, Los Angeles.

This observed marked racial variation in the incidence of PPMC may explain at least in part the wide range of rates reported in the literature, he added.

PPCM is a rare disorder of unclear etiology. The diagnosis is made in patients who experience left ventricular dysfunction with a documented ejection fraction of less than 50%, onset during the final month before or the first 5 months after delivery, and in whom no alternative cause for heart failure can be found.

The diagnostic requirement that systolic dysfunction be present prevents PPCM from being confused with preeclampsia, which is marked by diastolic dysfunction. Patients with PPCM commonly present with arrhythmias or thromboembolism rather than with classic heart failure symptoms.

In the Kaiser study, all of the nearly quarter-million women were initially screened using ICD-9 codes for hospitalization for heart failure from 6 months before to 12 months after delivery. Patients flagged in this way then underwent detailed chart review, which resulted in the diagnosis of PPCM in 60 cases.

No cardiac transplantations and only two deaths occurred in the PPCM group, for an all-cause mortality of 3.3% during an average follow-up of 4.7 years. One death occurred 5 months after delivery in a woman with complications of deep vein thrombosis, while the other was caused by respiratory failure more than 4 years after delivery in an asthmatic patient whose left ventricular function had recovered long before.

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DR. BRAR

Other investigators have reported mortality rates as high as 50% in women with PPCM, with half of the deaths occurring within the first 3 months after delivery. Dr. Brar offered several potential explanations for the low rate in the Kaiser series. One is that many of the prior reports date from an era before routine use of modern evidence-based heart failure medications such as ACE inhibitors and β-blockers.

Another possibility is that earlier reports were biased by preferential detection of more advanced cases of PPCM. "Our process of screening by ICD-9 codes with individual chart review of all potential cases may have allowed for identification of less-sick patients," he said.

Yet another potential explanation for the disparate results is that the improved outcomes in the Kaiser study stemmed from the selective nature of the prepaid health plan membership, in which the very poor and very rich are underrepresented.

Dr. Brar said this initial report is just the first phase of an ongoing Kaiser study. Now that he and his coinvestigators have reported on PPCM incidence and survival, they are focusing next on identification of risk factors and attempting to pin down the optimal duration of medical management.

Session Cochair Dr. Peter Liu of the University of Toronto noted that a number of risk factors for PPCM are already known. These include preeclampsia, black race, and advanced age at first pregnancy. There has also been speculation that PPCM might be a form of myocarditis. ■