

Biomarker test for Peripartum Cardiomyopathy could help reduce death after giving birth

May 17 2014

Cardiologists have discovered biomarkers that can be used to develop a screening test to detect Peripartum Cardiomyopathy (PPCM), a life-threatening disorder that is the primary cause of mortality in pregnant women in developing countries. The results, which can lead to the immediate treatment of PPCM in new mothers and a significant reduction in mortality, were presented at Heart Failure 2014, which opened the World Congress on Acute Heart Failure in Athens the 17 to the 20 May.

"For [pregnant women](#) there are two major causes of death: massive hemorrhage and PPCM, and it is a very sad situation because a time of great happiness turns to great sorrow and the new baby and the father are left alone," said study co-author Professor Alexandre Mebazaa, from the Hopital Lariboisiere, Paris. "Here we have found a way to detect rather quickly whether the woman has PPCM and to treat it quickly and efficiently."

PPCM is the leading cause of death in [women](#) who are pregnant or have just given birth in Haiti, South African and Egypt, according to the study's authors. Treatment was often delayed because it was difficult to know whether the women were experiencing normal symptoms of pregnancy or PPCM. The new discovery will allow doctors to administer a blood test to determine whether the woman has PPCM and begin effective treatment immediately.

"There's an urgent need for biomarkers of PPCM since the condition can be hard to differentiate from the normal symptoms of pregnancy that include dyspnoea, oedema and palpitations", said Professor Karen Sliwa, a co-author from the University of Cape Town, South Africa.

The authors hypothesized that since angiogenesis and relaxin-2 pathways are altered in PPCM the biomarkers ratio of these two pathways placental growth factors/sFlt-1 and relaxin-2 could be used to discriminate PPCM among peripartum women.

In the study, plasma was withdrawn from 77 PPCM patients, 75 healthy peripartum women, 25 breast feeding mothers, and 65 non-pregnant [acute heart failure](#) (HF) patients and tested for levels of cardiovascular (NT-proBNP), anti- (sFlt-1) and angiogenic [Placental (PlGF) or vascular endothelial (VEGF)] .

Results showed that compared to the other groups, PPCM patients had significantly higher levels of NT-proBNP, lower levels of plasma relaxin-2, and that the sFlt-1/PlGF ratio and sFlt-1/VEGF ratio were statistically lower.

"The next step will be to confirm our findings in a larger cohort and if they hold we could go on to develop a bed side test similar to NT-pro BNP in HF," said Professor Sliwa.

Provided by European Society of Cardiology

Citation: Biomarker test for Peripartum Cardiomyopathy could help reduce death after giving birth (2014, May 17) retrieved 3 June 2024 from <https://medicalxpress.com/news/2014-05-biomarker-peripartum-cardiomyopathy-death-birth.html>

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