

Pre-eclampsia Therapy Required to Reduce Maternal Death

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Pre-eclampsia is still the cause of maternal and perinatal morbidity and mortality. In this passing decade, pathogenesis of pre-eclampsia is still unexplainable. Dr. dr. Diah Rumekti Hadiati, M.Sc, Sp. OG(K), is one researcher from UGM that examines this topic.

“Prevalence of pre-eclampsia in Indonesia is between 3-10% of all pregnancies. In Dr. Sardjito General Hospital, the death rate of mothers due to pre-eclampsia/eclampsia is 34.09%. Reports say pre-eclampsia surpassed bleeding and infection as main cause of maternal death,” said dr. Diah in her doctoral promotion on Thursday (7/9) in the Auditorium of Faculty of Medicine UGM.

Diah explained pre-eclampsia is still a pregnancy specific disease signed by hypertension and proteinuria, sometimes developing into multi-organs disorder. The disease corresponds to intrauterine growth retardation, activation of chronical immune system, and disfunction of multiorgan endothelium that increases maternal blood pressure.

In the examinationa, Diah defending her dissertation titled *Difference of Protein Bcl-2 Family Expression as Regulator of Caspase Trophoblast Activity in Pregnancy with Pre-eclampsia Compared with Normotension Pregnancy.*”



“The goal of the research is to compare protein proapoptotic expression and protein antiapoptosis in trophoblast placenta cells in pregnancy with severe pre-eclampsia and normotension pregnancy,” said Diah.

Placenta development, she said, depends on attachment and effective invasion of trophoblast in maternal decidua. In normal pregnancy, apoptotic trophoblast will increase along with placenta growth and pregnancy progress. Apoptosis may also increase in maternal condition with pregnancy complication, mola hydatidosa, pre-eclampsia, and retarded fetal growth.

“New findings in this research is between Bcl-2 family proteins, Bcl-xL protein has the biggest role for severe pre-eclampsia. This result is consistent and unaffected by parity and pregnancy age of the research subject,” she said.

She concluded that the expression of stimulator apoptosis (Bax) in pre-eclampsia is higher than normal pregnancy, while protein Bak expression does not produce significant difference, also expression of apoptosis inhibitor in pre-eclampsia is lower than normal pregnancy.

The research, said Diah, opens opportunity for further research to the development of immunotherapy for pre-eclampsia. She hoped research using testing animal can be developed soon to accelerate research development towards the cause and therapy of pre-eclampsia.

“Hopefully with this research, therapy for pre-eclampsia, a disease that is still considered as disease of theory, can develop a substance that can increase activity of antiapoptotic protein. Hence, pre-eclampsia is curable in the future,” she said.

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