2nd World Congress on
FETAL AND MATERNAL MEDICINE
July 24-25, 2019 Kyoto, Japan

The etiology and pathophysiology of preeclampsia

Sayed Mostafa Mousavi
Iran

Preeclampsia is the oldest known human disease with yet an unknown etiology. A series of interesting experiments performed by Gantt and co-workers in the 70s have provided us with important clues but have not received the attention they deserve. Two distinct groups were recognized in Dr. Gants experiments. The first were healthy primigravid subjects at 32 weeks of gestation. They needed more than 8 ng/kg/min of angiotensin II infusion to develop pressor response. This group remained normotensive throughout their pregnancy. The second primigravid group of the same gestational age required less than 8 ng/kg/min of angiotensin II infusion to demonstrate the same pressor response. This group later demonstrated a loss of normal pregnancy's refractoriness to the pressor effect of angiotensin and became overtly hypertensive and prone to preeclampsia. The logical conclusion is that those women prone to preeclampsia required lesser angiotensin infusion to reach the threshold for excitation and show a pressor response because they had been already producing increased amount of endogenous angiotensin. We know that the only pathologic condition causing increased angiotensin production is renal ischemia. In fact, every sign and symptom of preeclampsia like proteinuria, oliguria, hematuria, edema and hypertension are the signs of renal ischemia. This is also true about their predisposing factors. Confidently we can say that at 20th week of gestation, preeclampsia prone women renal ischemia and increased angiotensin production manifested by vasospasm and hypertension. But what is the cause of renal ischemia? Gant and co-workers did another experiment. They found that the majority of nulliparous women who demonstrated a pressor response, an increase of at least 20 mm/Hg in their diastolic pressure, when turned from side to back were also susceptible to preeclampsia. This means that rolling over acts like or enhances angiotensin production by causing or aggravating renal ischemia. Rolling over can aggravate renal ischemia and increase angiotensin production only and only by causing or aggravating an existing renal compression. Therefore, we can conclude that the pregnant uterus at 20th week of gestation reaches the kidneys and compresses them to cause renal ischemia, manifested by increased angiotensin production, vasospasm and hypertension.

holocaustofourtime@gmail.com