

Placental villous hypermaturation in idiopathic spontaneous preterm births in Srinagarind Hospital

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ABSTRACT

Objective: To determine the association between preterm births (PTBs) and placental villous hypermaturation (PVH), a pathological finding which suggests placental insufficiency.

Methods: This retrospective study was conducted at Srinagarind Hospital, Khon Kaen University, Thailand during 2011 and 2015. Medical records of women with PTBs were reviewed for demographic data and causes of PTBs. All placental specimens were re-examined to ensure diagnoses of PVH. It is our routine practice to evaluate placental pathology in all cases with PTBs.

Results: Of 97 women with PTBs, 34 (35.1%) were found to have identifiable causes of PTBs including chorioamnionitis, intrauterine growth restriction, preeclampsia, maternal heart disease, and maternal systemic lupus erythematosus. Of 97 placental specimen examined, PVH was noted in 70 specimens (72.16%; 95% confidence interval, 62.1%-80.8%). Prevalence of PVH among idiopathic spontaneous PTBs was slightly higher than that in PTBs with known causes (74.6% versus 67.6%, respectively). This difference however did not reach statistical significant level ($P=0.47$). The prevalence of PVH was increased in pregnant women aged younger than 35 years compared to older pregnant women (86.1% versus 32.0%, $P<0.001$). The prevalence of PVH was positively associated with gestational age (GA) (92.3% in GA less than 28 weeks, 85.1% in GA between 28-33 weeks, and 48.7% in GA 34 weeks or more, $P<0.001$).

Conclusion: Prevalence of PVH is considerably high among PTBs, particularly in those with idiopathic spontaneous PTBs. Factors associated with PVH among women with PTBs included maternal age and gestation age.

Keywords: placental villous hypermaturation, placental insufficiency, preterm births