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Clinical relevance of angiogenic factors in late onset pre-eclampsia

J. Bartha¹, A. Abascal Saiz¹, M. Duque², V. Atanasova¹, I. Duyos¹, L. Sotillo¹, T. Illescas¹, I. Orensanz¹, A. Buño², E. Antolin¹

¹Maternal and Fetal Medicine, Hospital Universitario La Paz, Madrid, Spain; ²Biochemistry, Hospital Universitario La Paz, Madrid, Spain

Objectives: The clinical significance of sFlt1:PlGF ratio in late onset pre-eclampsia is unclear. The aim of the present study was to evaluate the relationships of this parameter with maternal and perinatal outcomes.

Methods: This is a pilot prospective case-control study. In total 45 pregnant women, 16 with late onset pre-eclampsia (> 34 weeks) (8 mild and 8 severe) and 29 controls were studied. sFlt1, PlGF and ratio sFlt1:PlGF ratio was measured by immunoassay (Roche Corp). Patients were classified in mild and severe pre-eclampsia. Relationships with hematological, biochemical, Doppler parameters and perinatal outcomes were studied. Student t test, ANOVA test and Pearson's coefficient correlation were used. Statistical significance was set at 95% level (p < 0.05).

Results: sFlt1 and sFlt1:PlGF ratio were significantly increased and PlGF was decreased in women with late onset pre-eclampsia in comparison to controls. Overlapping was more pronounced for PlGF than for both sFlt1 and sFlt1:PlGF ratio. There were no significant differences between mild and severe cases in the level of angiogenic factors. However, sFlt1:PlGF ratio was significantly correlated with creatinine, ALT and AST (r = 0.53, p = 0.03, r = 0.54, p = 0.03, r = 0.58, p = 0.01 respectively). In the subgroup of women with pre-eclampsia sFlt1:PlGF ratio was significantly correlated with uterine artery PI (r = 0.82, p = 0.005) and both PlGF and sFlt1:PlGF were correlated with birthweight in centiles (r = 0.59, p = 0.02 and r = - 0.65; p = 0.01).

Conclusions: In women with late onset pre-eclampsia angiogenic factors may identify women with defective placentation but their relationships with maternal morbidity although present is poor.

EP01.07: Table 1.

		n	mean	SD
PlGF	Control	29	296,5166	212,46745
	pre-eclampsia	16	128,6375	105,50116
sFlt1	Control	29	4362,8966	3064,34993
	pre-eclampsia	16	13870,8375	10361,44167
Ratio	Control	29	26,4564	26,77687
	pre-eclampsia	16	169,5997	173,71986

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Evolution of the cervix during gestation and risk of preterm birth

A.O. Melo^{1,2}, J.S. Tavares¹, F.D. Melo¹, F.M. Ramos¹, L.S. Trajano², T.O. Dias¹, R.M. Moura¹

¹Saude da Mulher, Instituto de Pesquisa Professor Joaquim Amorim Neto, Campina Grande, Brazil; ²Universidade Federal de Campina Grande, Campina Grande, Brazil

Objectives: To evaluate the evolution of the cervix during pregnancy and the risk of preterm delivery.

Methods: This is a cohort study including 117 pregnant/newborns. The pregnant women were evaluated at the 12th, 20th and 32th week (evaluation of the uterine cervix by transvaginal

ultrasonography on the Samsung WS80 Elite) and immediately after delivery to determine the gestational age at birth. A variance analysis was performed to determine the association between uterine cervix measurement at the 12th, 20th and 32th weeks and prematurity, the paired T-test to evaluate the evolution of the uterine cervix at two times and the analysis of variance for repeated measurements was used to evaluate the association between longitudinal cervical follow-up and the risk of prematurity. The project was approved by the Ethics Committee.

Results: A total of 117 pregnant women, with a frequency of 10.1% of prematurity, were evaluated. The mean of the cervix at week 12 was 3.9 ± 0.52 cm, 3.5 ± 0.43 cm at week 20 (p = 0.57) and 2.8 ± 0.80 cm at week 32 (p = < 0.0001). The mean of the cervix at the 12th was 3.9 ± 0.51cm vs 4.00 ± 0.50cm, p = 0.73 (term vs premature), at the 20th week of 3.8 ± 0.41cm vs 3.3 ± 0.61cm, p = 0.04 (term vs premature), at the 32th was 3.2 ± 0.65cm vs 2.8 ± 0.80cm, p = 0.64 (term vs premature). We did not observe an association between the evolution of the cervix during gestation and prematurity (p = 0.61).

Conclusions: A physiological reduction of the cervix was observed with the progression of gestation, with no association between the evolution of the cervix and the presence of prematurity. Association was observed between prematurity and uterine cervix evaluation at the 20th week.

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Cervical strain and length in pregnant women with prior loop electrosurgical excision procedure (LEEP): a preliminary study

W. Seong¹, H. Kim¹, J. Sung², E. Son³, H. Seol³, H. Hwang⁴, H. Kwon⁵, H. Park⁵, M. Kwon⁶, J. Kwon⁶, H. Park⁷, S. Oh⁷

¹Department of Obstetrics and Gynecology, Kyungpook National University Hospital, Daegu, Jung-gu, Republic of Korea; ²Department of Obstetrics and Gynecology, Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine, Seoul, Republic of Korea; ³Department of Obstetrics and Gynecology, Kyung Hee University Hospital at Gangdong, Seoul, Republic of Korea; ⁴Department of Obstetrics and Gynecology, Research Institute of Medical Science, Konkuk University School of Medicine, Seoul, Republic of Korea; ⁵Department of Obstetrics and Gynecology, Dongguk University Ilsan Hospital, Graduate School of Medicine of Dongguk University, Goyang-si, Republic of Korea; ⁶Department of Obstetrics and Gynecology, Institute of Women's Life Medical Science, Yonsei University College of Medicine, Seoul, Republic of Korea; ⁷Department of Obstetrics and Gynecology, Samsung Medical Center, Sungkyunkwan University, School of Medicine, Seoul, Republic of Korea

Objectives: Although women with prior LEEP history are generally considered as having higher risk of preterm birth, recent meta-analysis indicated that the absolute risk of preterm birth is less than 10%. Recently, cervical elastography has emerged as an ancillary tool to cervical length (CL) for prediction of preterm birth. Here, we aimed to determine if a previous LEEP before pregnancy is associated with the change of cervical strain as well as shortening of CL.

Methods: This data is a part of multicentre prospective observational study about prediction of preterm birth using cervical elastography (E-cervix study) in Korea between March 2018 and February 2019. The cervical elastography was performed at the time of CL measurement in midtrimester of asymptomatic gravidas who underwent a LEEP prior to pregnancy (n = 30) or who had not had this procedure (n = 34). Cervical elastography was obtained at midsagittal plane same as for CL measurement using E-cervixTM (WS80A, Samsung Medison, Seoul, Korea) and mean value of elastographic parameters including contrast index (ECI), hardness ratio (HR), mean strain level in internal os (IOS) and external os (EOS)