

SHORT COMMUNICATION

Preeclampsia Screening Using the Ratio of Soluble FMS-Like Tyrosine Kinase-1 to Placental Growth Factor During Pregnancy in Pregnant Korean Women

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SUMMARY

Background: We retrospectively investigated soluble fms-like tyrosine kinase-1 (sFlt-1)/placental growth factor (PIGF) ratios and screen-positive rates according to cutoff values for preeclampsia risk assessment based on the number of fetuses.

Methods: sFlt-1/PIGF ratios < 38.0 and < 53.0 were defined as low risk of preeclampsia (screen negative) for singleton and twin pregnancies, respectively.

Results: During the study period, 442 test results from 403 pregnant women (374 with singleton and 29 twin pregnancies) from 32 local clinics and hospitals were analyzed. The overall rate of positive preeclampsia screening was 25.1% and this rate was higher when gestational age was ≥ 34 weeks than when it was < 34 weeks (58.7% vs. 18.6%, $p < 0.05$). Among 34 women with follow-up results, a change in interpretation category was observed during the follow-up period at ≥ 4.8 weeks for singleton and ≥ 1.6 weeks for twin pregnancies, respectively.

Conclusions: This study may help to understand the sFlt-1/PIGF ratio in pregnant Korean women.

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Supplementary Tables

Table S1. Definitions of screening results based on different cutoffs for different gestational ages and number of fetuses.

sFlt-1/PIGF ratio results	Screening negative	Screening positive	
	Low risk	High risk	Suspicious preeclampsia
Singleton pregnancies			
Early phase (< 34 weeks of gestation)	< 38.0	38.0 - 84.9	≥ 85.0
Late phase (≥ 34 weeks of gestation)	< 38.0	38.0 - 109.9	≥ 110.0
Twin pregnancies	< 53.0	≥ 53.0	

Table S2. Basal characteristics of 442 test results from 403 pregnant women (374 with singleton and 29 twin pregnancies).

	Total	Singleton	Twin	p-value
Age, mean (SD)	34.2 (4.2)	34.2 (4.3)	34.1 (3.9)	0.92
Gestational age, median (IQR)	32.0 (26.4 - 34.9)	32.0 (26.1 - 35.1)	31.1 (28.8 - 32.8)	0.16
Requested hospital type, n (%)				< 0.01
University hospitals	204 (46.2)	180 (88.2)	24 (11.8)	
Maternity hospital/local clinics	238 (53.8)	230 (96.6)	8 (3.4)	

Abbreviations: IQR - interquartile range, SD - standard deviation.