Introduction
Though sporadic premature atrial contractions (PAC) without underlying disease do not need follow-up, premature ventricle contractions (PVC) need to be examined carefully. The purpose of this study was to establish a simple method to differentiate PVC from PAC using systemic artery pulse Doppler waves by fetal echocardiograms.

Methods
We retrospectively identified 14 fetuses; 8 fetuses with PAC and 6 fetuses with PVC. Based on arterial pulse Doppler, we measured the time of 2 consecutive heartbeats including the premature contraction (VXV interval) and 2 consecutive heartbeats just before premature contraction (VVV interval). We calculated difference between VVV interval and VXV interval, and examined if we could distinguish PAC from PVC.

Results
The mean fetal gestational weeks were 33.9 ± 3.2 weeks (mean ± SD). The background of PAC and PVC was not significantly different. Difference between VVV interval and VXV interval was less than 33ms in all PVC cases, and that was more than 33ms in all PAC.

Conclusion
• This study indicates that measurements of VXV interval and VVV interval from arterial Doppler waveform by fetal echocardiography can easily distinguish PVC from PAC in utero.
• This simple method has the potential to become an effective screening method to select the fetuses with PVC requiring further assessment at the fetal cardiac center.