Objectives
To evaluate the feasibility and value of automated cardiac motion quantitation (aCMQ) for measuring the global and regional longitudinal strain of left ventricle in fetuses.

Methods
One hundred and eighteen normal fetuses were divided into 4 groups by gestational age, standard four-chamber view clips were collected, the global and segmental longitudinal peak systolic strain of the left ventricle were measured by aCMQ, interobserver and intraobserver variability was analyzed.

Results
The success rate of aCMQ analysis was 89%. There was no significant correlation between the gestational age and the global and segmental longitudinal peak strain of the left ventricle ($r=0.01-0.14$, all $P>0.05$). The base and middle segmental strain values of left ventricular free wall were similar to that of the interventricular septum ($P>0.05$). The strain of the apex segment was higher than that of the base and middle segment ($P<0.05$). Interobserver and intraobserver variability showed a small bias among the observers.

Conclusion
aCMQ is a novel method two-dimensional speckle tracking of echocardiography for evaluating global and regional systolic function of fetal left ventricle. It’s a feasible and reproducible approach to quantitatively evaluate normal cardiac function of fetus and may have potential in fetuses with congenital heart diseases.