Introduction
To investigate the association of continuity and thickness of puborectalis muscle with different delivery modes.

Methods
179 primipara were recruited in this study (136 vaginal delivery=group V, 13 forceps assisted delivery=group F, 30 cesarean section=group C). All women received 3-D transperineal ultrasound. The configuration and thickness of puborectalis muscle were evaluated during rest and Valsalva maneuver.

Results-continuity
Puborectalis discontinuity was detected in 16 women out of all 179 cases (16/179, 8.9%), including 9/136 (6.6%) in group V, 5/13 (38.5%) in group F, and 2/30 (6.5%) in group C. The incidence of group F was higher than that of group V and group C, showing statistical significance ($P=0.003$ and $P=0.017$). No difference was found between the group V and group C.

Results-thickness
The thickness of puborectalis showed no statistic difference between 3 groups (both during rest and Valsalva maneuver).

Conclusion
Delivery modes had impact on the risk of the puborectalis injury. The forceps delivery group have higher risk than others.

Conclusion
The delivery modes did not significantly affect the thickness of puborectalis muscle, although they have difference in data.