Objectives

This study was conducted to estimate the efficacy and safety of knotless barbed suture for closure of myometrium during cesarean section compared to conventional method.

Methods

This was a retrospective study between August 2018 and March 2019. Patients who underwent cesarean delivery at Korea University Ansan Hospital, Republic of Korea, were reviewed. Main outcome measures were surgical outcomes including uterine closure time, operative time, estimated blood loss and sonographic results of myometrial thickness at site of cesarean section scar at 6 to 8 weeks after operation.

Results

Out of total 53 women, 24 women had knotless barbed suture and 29 women had conventional method. The number of previous cesarean section was similar as well as demographic and clinical characteristics between groups. Compared to conventional suture, the suturing time to close the uterine incision were reduced but it was not significant (p=0.063). Operation time, estimated blood loss during operation, change in hemoglobin at third day of operation, transfusion and postpartum infection and bleeding demonstrated no significant difference between two groups. At 6 to 8 weeks after operation, transvaginal ultrasound revealed no differences in residual myometrial scar thickness between two groups.

Conclusion

Slightly reduced uterine closure and operation time, but not significant, were identified with knotless barbed suture compared to conventional method. There were no increased rate of perioperative complications with knotless barbed suture. It is notable that this is the first study to show no difference in residual myometrial scar thickness.