

# Double-layered purse string uterine suture employing the French ambulatory cesarean section technique compared with single-layer continuous uterine suture: An ultrasound evaluation randomized trial.

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## Abstract

Objective: To test the hypothesis that compared to single layer continuous uterine suture (SLCUS), a double layered purse string uterine suture (PSUS) significantly reduces cesarean scar defect (CSD) rates, without increasing the perioperative maternal morbidity. Design : Interventional prospective, randomized study . Setting: University obstetric units in Tunisia. Population: 100 pregnant women with an indication of a planned Caesarean. Methods: Patients were enrolled in 2 groups according to the uterine suture technique: SLCUS or PSUS. A Saline infusion hysterosonography was performed by the same senior obstetrician blinded to the uterine suture technique 6 months after surgery . Main Outcome measures: Operative time and Calculated blood loss (CBL) were used for the short time analysis . Uterine and CSD measurements were used for the mid time analysis . Results : Despite a few minutes longer operative time in SUS group ( $7.17 \pm 2.31$  min Vs.  $6.31 \pm 3.04$  min,  $p = 0.028$  in SLCUS group;  $p < 10^{-3}$ ); there was no significant difference in terms of CBL ( $520 \pm 58$  in SUS group vs.  $536 \pm 50$  ml in SLCUS group,  $p = 0.724$ ). The medium-term analysis showed a significant decrease in the rate of CSD with the PSUS: 6.66% vs. 40% with SLCUS;  $p = 0.002$ . Moreover, SLCUS was the leading risk factor for CSD : adjusted OR=6 ;95% CI [0- 1],  $p < 10^{-3}$  . Conclusion : Compared to single layer continuous suture, purse string uterine suture significantly reduces cesarean scar defect rates, without increasing the perioperative maternal morbidity. NCT03930134. <https://clinicaltrials.gov/ct2/show/NCT03930134>

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