

Sonographic Assessment of the Lower Uterine Segment (LUS) Thickness and Integrity in Patients with Previous Cesarean Delivery

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Objective: To evaluate the appearance of the LUS in patients with previous cesarean section compared to an unscarred uterus.

Design: A Prospective Study.

Setting: Maternity and Children Hospital, Arar, Saudi Arabia.

Method: The study was performed from 1 March 2018 and 31 December 2018. One hundred twenty pregnant women were recruited from the antenatal clinic. Study group consisted of 60 patients with one or more previous cesarean delivery and control group consisted of 60 patients with no history of cesarean delivery. All patients were pregnant at 36 to 38 weeks gestation.

A transabdominal ultrasound examination with a partially filled bladder followed by a transvaginal sonographic examination was performed. The obstetrician who performed the surgery documented the appearance of the LUS. Statistical analysis was performed using student t-test and Fisher exact test when appropriate. P-value<0.05 was considered significant.

Result: No significant difference was found between both groups regarding maternal age, parity, gestational age and cephalic presentation. The sonographic measurement of the LUS in study group was significantly thinner compared to control group.

A statistically significant progressive thinning of the LUS was found with the increased number of cesarean deliveries. Two (3.3%) patients were confirmed to have uterine dehiscence. Twelve (20%) were reported to have a paper-thin LUS, two (3.3%) patients had transparent LUS, and 44 (73.3%) had normal LUS thickness.

Conclusion: The lower uterine segment was thinner in women with previous cesarean delivery compared to women with unscarred uterus.

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