How risky is failed trial of labor after cesarean section?

Ashwal E, Melamed N, Hiersch L, Aviram A, Wiznitzer A, Yogev Y
Helen Schneider Hospital for Women, Rabin Medical Center, Petach Tikva, and Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel, Petah Tikva, Israel

Objective
To determine the impact of urgent cesarean section (CS) during trial of labor after cesarean (TOLAC) on perinatal outcome.

Methods
A retrospective cohort study of all women with singleton pregnancies who underwent urgent CS (defined as any non-elective CS) during TOLAC in a university-affiliated tertiary hospital (Jul-2012 to Mar-2014). Failed TOLAC was compared to those with urgent primary CS and to a control group of women with prior single CS who underwent elective CS. Composite adverse maternal outcome was defined as any of the following: PPH, need for blood transfusion, fever>38.0°C, uterine rupture or need for repeat laparotomy. Composite adverse neonatal outcome was defined as any of the following: mechanical ventilation, meconium aspiration syndrome, cord pH<7.1, Apgar <7 at 5 minutes, RDS, need for phototherapy, hypoxic-ischemic encephalopathy or NICU admission.

Results
1) Overall there were 15,564 deliveries during the study period, of them, 2,273 (14.6%) underwent CS. Of them, 108 (0.7%) had failed TOLAC, 661 (4.2%) had an urgent CS without a history of prior CS and 461 (2.9%) women with elective repeat CS (Figure). 2) Women who failed TOLAC were older compared to women with urgent CS without a history of prior CS (33.2±4.6 vs. 30.8±5.3 years, P<0.001) but not compared to the controls. 3) No significant difference was found in rates of preterm delivery (6.8 vs. 8.0 vs. 4.4%, P=0.07), hypertensive disorders (2.8 vs. 2.9 vs. 2.2%, P=0.73) and diabetes mellitus (6.5 vs. 6.7 vs. 7.2%, P=0.94) between all studied groups. 4) The main indications for urgent CS were NRFHR, cephalo-pelvic disproportion and failed induction without significant difference between women who failed TOLAC and women with urgent CS without a history of prior CS (34.3 vs. 34.4%, 17.6 vs. 23.9%, 11.1 vs. 12.9%, respectively, P>0.05 for all). Among women who attempted TOLAC, uterine rupture occurred in two cases (1.8%). 5) In multivariate analysis adjusted for maternal age, gestational age at delivery, nulliparity, induction of labor, oxytocin augmentation, cesarean duration and birth weight failed TOLAC was not associated with an increased risk for adverse maternal or neonatal outcome (Table).

Conclusion
Failed TOLAC was not associated with increased rate of composite maternal or neonatal adverse outcome compared to women undergoing urgent CS with no previous CS or to women undergoing elective CS.