

Ultrasound measurement of inferior segment thickness: value in predicting uterine rupture

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BACKGROUND

The increasing rate of cesarean deliveries brings its own set of complications, the most serious being uterine rupture. Delivering with a scarred uterus is becoming increasingly common. The choice of delivery route depends on several factors, including the quality of the uterine scar.

AIM

to evaluate the benefit of ultrasound measurement of the lower uterine segment in the decision of delivery route .

METHODS

This was a prospective study including 25 parturients with a scarred uterus (History of a single cesarean section) and a gestational age between 35 and 41 weeks conducted over 5 months. The participants underwent a 2D ultrasound measurement of the thickness of the lower uterine segment (LUS).

RESULTS

The average age of our parturients was 29.56 years. All were secundiparous with a uni cicatricial uterus. The mean interpregnancy interval was 20.68 months, ranging from 12 to 34 months.

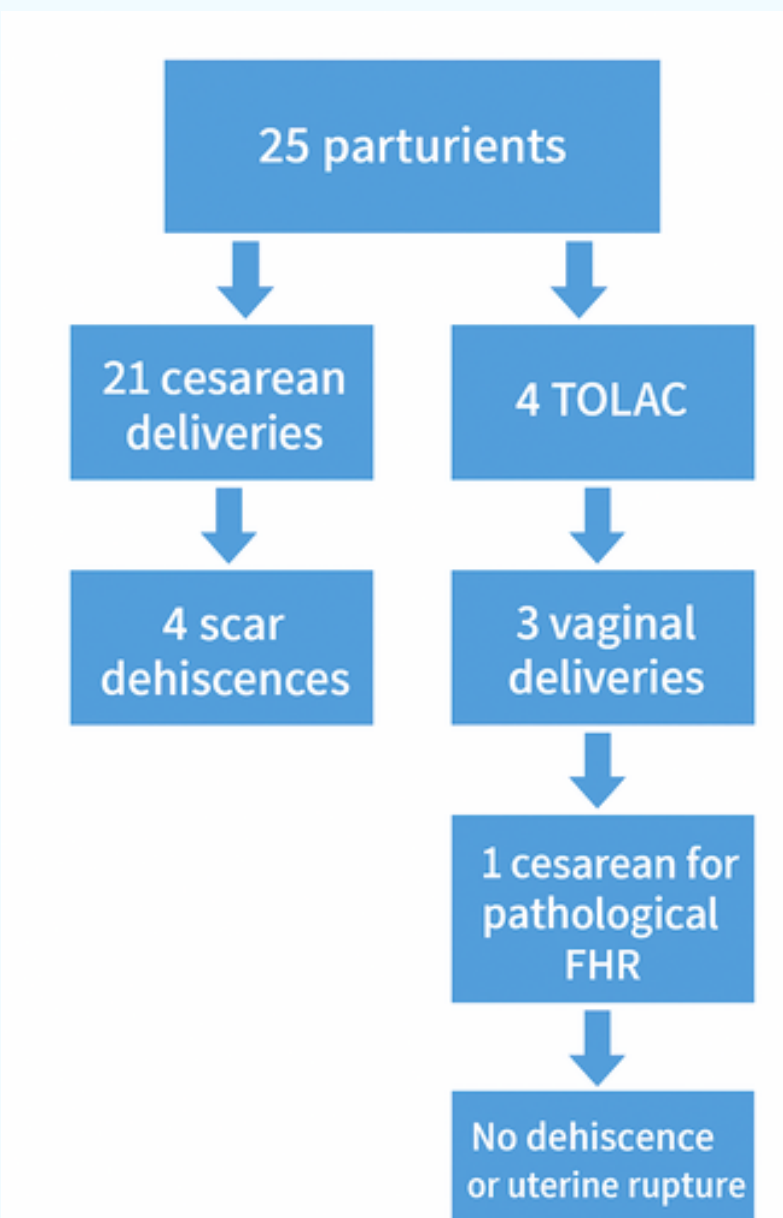


figure 1 :
Distribution of patients according to delivery outcome
TOLAC (Trial of Labor After Cesarean)
FHR (Fetal Heart Rate)

The average ultrasound measurement of the inferior segment (IS) was 2.724 mm, with extremes ranging from 1.1 to 6.4 mm. Vaginal delivery was attempted in 16% of cases (n=4/25), with three successful deliveries and one failure due to pathological fetal heart rate tracing. Uterine revision revealed an empty and intact uterine cavity. The average IS thickness in these patients was 3.35 mm.

For the remaining parturients (n=21/25), a prophylactic cesarean section was performed, primarily due to pelvic anomalies (n=12/25). Intraoperative uterine dehiscence was observed in 18% of cases (n=4/22), with an average lower uterine segment thickness of 1.55 mm.

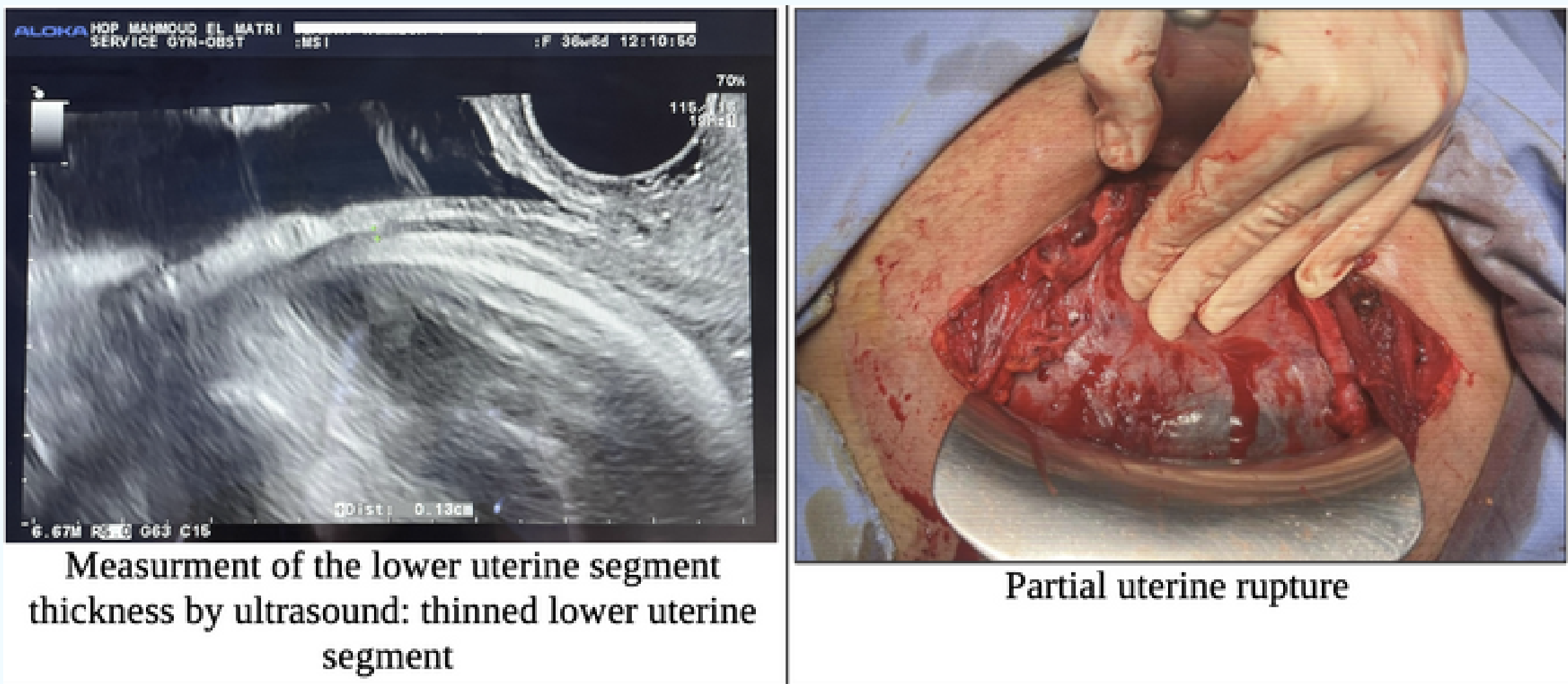


figure 2 : correspondance between songraphy and operative view

CONCLUSION

In women with a scarred uterus, particularly those with a single previous cesarean section and no contraindication to a trial of labor, measurement of the lower uterine segment appears to be a valuable tool for predicting the risk of uterine rupture.