ROUTE OF MYOMECTOMY AND SUBSEQUENT CESAREAN SECTION OUTCOMES IN WOMEN DESIRING FUTURE FERTILITY

Authors: Rosenbaum C (1), Mohebbi L (1), Dori L (2), Davidov A (1)

Affiliations: (1) Northwell Health, Zucker School of Medicine at Hofstra, Staten Island University Hospital, Staten Island, NY, USA, (2) Albany Medical College, Albany, NY, USA

Background:
A myomectomy is the surgical removal of uterine fibroids in an effort to preserve future fertility. Decision on surgical approach (robotic myomectomy (RM), laparoscopic myomectomy (LM), and abdominal myomectomy (AM)) is multifactorial [1]. There is typically no difference in blood loss or postoperative complications between RM and LM [2]. RM has not been shown to have a significant difference in cesarean delivery outcomes when compared to LM [3]. While previous studies have compared cesarean section (CS) outcomes after RM versus LM, no previous study has compared skin to delivery time and neonatal outcomes after RM, LM, and AM. Research in this area could predict complexity of cesarean sections and could guide clinical decision making and preparation to improve surgical morbidity and mortality.

Objective:
The purpose of this study was to compare LM, RM, and AM approaches and their subsequent cesarean and fetal outcomes (primary maternal outcome= skin to delivery time (SDT), primary fetal outcome=5 min APGAR score (APGAR-5min)).

Methods and Materials:
Patients were identified through an electronic health record (EHR), Allscripts Sunrise (Allscripts, Chicago, USA) based on myomectomy and cesarean section CPT codes. All cases identified were verified via chart review. Statistical significance of primary outcomes was assessed via one-way analysis of variance (ANOVA) in IBM SPSS Statistics (version 29.0.1.0).

Results:
A total of 47 patients had a myomectomy (10 LM, 10 RM, 27 AM) with subsequent CS at our institution between February 2018 and January 2023. There was no significant difference in age, parity, or BMI between the three groups. Seven patients had in-vitro fertilization (14.8%). The interval time between myomectomy and CS was not statically significant between the three groups, [$F_{(2,44)}= 0.80$, $p= 0.45$]. A one-way ANOVA revealed that there was a significant difference in SDT between groups [$F_{(2,43)}=7.072$, $p= 0.002$]. A Post Hoc Analysis showed AM had significantly longer SDT (average of 14.29 minutes) compared to both LM (8.4 minutes) ($p=.004$) and RM (9 minutes) ($p=.05$). There was no difference in SDT between RM and LM ($p=.74$). APGAR-5min was not significant between the three groups [$F_{(2,44)}=0.57$, $p=0.57$].

Conclusions:
Patients with previous AM had significantly longer SDT than patients who previously had RM or LM. This could be predictive of a more difficult CS. While this does not appear to impact fetal outcomes, our findings suggest the need for more comprehensive surgical planning in order to reduce maternal morbidity.

References:
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