

Cesarean Section Under General Anesthesia: Incidence Rising Since Height of COVID-19 Pandemic

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BACKGROUND

- A prior retrospective review at our institution revealed a 14.8% rate of cesarean sections (CS) under general anesthesia (GA) in 2019.¹
- In 2020, the height of the COVID pandemic, the rate of CS under GA dropped to 4.3%, an overall decrease of 10.5%.
- This decrease was thought to be due to COVID-19 conditions such as avoidance of intubation to improve outcomes for patients with COVID-19 and protect practitioners from contracting the virus.
- In clinical practice, we strive for a CS under GA rate of <5% in order to achieve SOAP Center of Excellence designation.
- Here, we evaluated whether the incidence of CS under GA increased during the COVID downtrend between October 2021 and March 2022.

METHODS

- The requirement for IRB approval was waived due to the retrospective nature of this project.
- A retrospective chart review was conducted of all parturients undergoing GA for CS from October 1, 2021 to March 31, 2022.
- Data were compared to previous historical trends from 2019 (pre-pandemic) and 2020 (beginning of pandemic).
- Data collected included: anesthesia and obstetric faculty, procedure urgency, fetal heart rate (FHR) tracing category, prior indication of FHR changes, pre-existing epidural status, and arterial cord gas values.
- Descriptive and comparative statistics were calculated.

RESULTS

Variable	Jan 1-Dec 31, 2020	Oct 1, 2021-Mar 31, 2022
Rate of CS under GA	7/163 (4.3%)	24/350 (6.9%)
Procedure Urgency		
Elective	0	1 (4.2%)
Urgent	1 (14.3%)	9 (37.5%)
Stat	6 (85.7%)	14 (58.3%)
Prior Indication of FHR Changes		
Yes	0	2 (8.3%)
No	7 (100%)	22 (91.7%)
Epidural Status		
Pre-existing	0	5 (20.8%)
Contraindicated	0	6 (25.0%)
Failed	0	4 (16.7%)
Timing Inadequate for activation	4 (57.1%)	8 (33.3%)
Patient Declined	3 (42.9%)	1 (4.2%)
Arterial Cord Gas		
pH	7.2	7.25
PCO2	56.7	55.5
Base Deficit	7.57	5.1

DISCUSSION

- Our center's rate of CS under GA decreased by 10.5% at the beginning of the COVID-19 pandemic but has now risen by 2.56% as we have moved further out.
- While our rate rose slightly, it is lower than our 2019 rate.
 - This could be due to a lower concern for morbidity and mortality with induction of GA as well as lower concern for provider COVID-19 exposure.
- Administration of GA is riskier to the patient and fetus compared to neuraxial techniques.
 - The more we can emphasize early neuraxial anesthesia in labor, the more we will be able to avoid GA for emergent indications.
- Five patients had pre-existing epidurals that failed to dose up for CS compared to 0 in the previous group.
 - Diligence of checking labor epidurals on the floor is important to ensure efficacy in emergent situations.
- Fetal cord gasses were comparable between groups.
- Future directions:
 - Education for obstetric and anesthesiology services to continue to optimize neuraxial anesthesia and analgesia.
 - Identification of ethnic/racial disparities that may contribute to the rate of CS under GA.

REFERENCES

1. Wise M, et al. (2021). SOAP Annual Meeting QI Presentation.
2. Ring L., et al. Curr Anesthesiol Rep. 2021; 11(1):18-27.