

Regional to General Anaesthesia conversion rate in Obstetric Anaesthesia and the implication of COVID pandemic, a three year data analysis

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Introduction

All international obstetric anaesthesia guidelines recommend spinal and epidural anaesthesia over general anaesthesia(GA) for caesarean sections (CS) due of the risk of failed intubation and its associated complications. RCoA best practice guidance recommends most of CS to be carried out with regional anaesthesia and also to reduce the conversion rate from failed regional to GA. Limited information is available on this failure rate due to the impact of Covid. We wanted to determine if we were meeting the RCoA[1] standards as above and also analysed our data to see any changes in the GA conversion rate for CS during the COVID-19 pandemic.

Methods

It was a retrospective project, conducted during the period from August 2018 to July 2021 after our institutional audit committee approval. The data were collected from anaesthetic obstetric database, theatre records and case notes. A total of 1406 CS were performed during August 2020-July 2021 with 1264 and 1513 CS during 2019-2020 and 2018-2019 respectively.

Results

From this project we could infer that we have been achieving the RCoA standards during the last three years. The percentage of CS done under regional has increased in all categories. But, after the COVID-19 pandemic our GA conversion rate for category I CS has dropped significantly (1.77%), with minimal change in category II & III (2.5%) whereas for category IV it has slightly increased (0.77%).

RCOA STANDARDS AND IMPACT OF COVID

Year	2018-19 (Pre Covid)			2019-20 (Covid after March 2020)			2020-21 (Covid)		
Categories of CS	I	II & III	IV	I	II & III	IV	I	II & III	IV
Carried out with Regional Anaesthesia(%) (RCoA Standards %)	78.4 (> 50)	91.5 (>85)	99.17 (>95)	86 (>50)	97 (>85)	99 (>95)	93.7 (>50)	97.2 (>85)	99 (>95)
Regional to GA conversion(%) (RCoA Standards%)	6.8 (<15)	3.53 (<5)	0.33 (<1)	7 (<15)	2 (<5)	0.3 (<1)	1.77 (<15)	2.5 (<5)	0.77 (<1)
Conversions									
1. Spinal conversion rate	18(50%)			14(43%)			10(45%)		
Technical difficulty	11			11			2		
Under-functioning	4			3			7		
Maternal compromise	3			0			1		
2. Epidural conversion rate	17(47%)			18(56%)			12(54%)		
Under-functioning	17			15			11		
Lack of time	0			2			1		

Discussion

We have consistently exceeded the RCoA standards in the last 3 years with a significant decline to <2% (as opposed to <15%) in general anaesthesia conversion rates for category I CS. This was similar to the cross-sectional analysis done in six hospitals in the north-west of England[2]. The reasons for this could be due to routine use of ultrasound in technically challenging cases and heightened awareness amongst theatre teams and junior trainees on airborne covid risk.

Acknowledgment

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References

1. Raising the standards: RCoA quality improvement compendium- chapter 7: Obstetrics. 4th edition, September 2020.(https://rcoa.ac.uk/media/15626)

2. Bhatia K, Columb M, Bewlay A, et al. The effect of COVID-19 on general anaesthesia rates for caesarean section. Across-sectional analysis of six hospitals in the north-west of England. Anaesthesia 2020; 76:312-319.