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P.19 Project on regional to general anaesthesia conversion rate in obstetric anaesthesia and the implication of COVID-19 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 section (CS) due to the risk of failed intubation and its associated complications. RCoA best practise guidance recommends most of CS are carried out with regional anaesthesia and also to reduce the conversion rate from failed regional to GA [1]. Limited information is available on this failure rate due to the impact of COVID-19. We wanted to determine if we were meeting the RCoA standards and also analysed our data to see any changes in the GA conversion rate during the COVID-19 pandemic.

Methods: This was a retrospective project, conducted during from August 2018 to July 2021 after our institutional audit committee approval. 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 under regional has increased in all categories. After the COVID-19 pandemic our GA conversion rate for category 1 CS dropped significantly (1.77%), with minimal change in category 2 and 3 (2.5%) whereas for category 4 it has slightly increased (0.77%).

Discussion: We have consistently exceeded the RCoA standards in the last 3 years with a significant decline to <2% (as opposed to <15%) in GA conversion rates for category 1 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-19 risk.

References

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P.20 “Out of severe COVID in peripartum women”

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Introduction: Although pregnant women appear to have a similar risk of contracting SARS CoV2, morbidity for obstetric patients is increased for ethnic minorities, maternal age >35 years, associated comorbidities and lower socio-economic groups [1]. SARS-CoV2 infection leads to an increased risk of preterm delivery, caesarean section (CS), stillbirth, and possible fetal growth restriction. Guidance recommends senior multidisciplinary involvement in decision making on how and when to deliver. A retrospective observational survey was performed, looking at maternal and fetal outcomes in women needing ICU admission with SARS CoV2 from March 2020 to November 2021 in our hospital.

Methods: Following the registration of the audit with Hospital Trust, electronic notes were retrospectively reviewed. Data collected were: demographics, mode of delivery, platelet count, type of anaesthetic, days of ventilation and outcome.

Results: During the study period 13,223 women were admitted to hospital of whom 201 tested positive for SARS CoV2; 10 were admitted to ICU. Three patients were from ethnic minorities and all were unvaccinated. Only one parturient who was ventilated before delivery had a stillbirth. Of the nine who delivered in our hospital, seven were admitted to ICU within 48 h of CS, one at 10 days, and one at 46 days postpartum. The decision to deliver was due to increasing respiratory distress in all patients except one who had resistant SVT. All patients required invasive ventilatory support in ICU, five required proning, two needed tracheostomy and two died.

Discussion: There was a significant increase in SARS CoV2 severity after unlocking the “second wave” (1/8/2020) vs. none in the first. SARS CoV2 infection was seen in 1.5% of all maternity admissions and mortality was 0.99%. Worsening maternal condition was the deciding feature for GA, not thrombocytopenia [2]. Two women who were not delivered early had significant events; one had a maternal peri-arrest at delivery, the other had a stillbirth. Their deteriorating condition required prompt delivery for maternal and fetal optimisation prior to ICU admission.

Year	2018-19 (Pre Covid)			2019-20 (Covid after March 2020)			2020-21 (Covid)		
	I	II & III	IV	I	II & III	IV	I	II & III	IV
Categories of CS									
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		

Figure: (abstract P.19). RCoA standards and impact of COVID-19.

Table: (abstract P.20). Maternal characteristics and outcomes.

Age	Gestation	BMI	GA vs Spinal	Platelet Count	Days ventilated	Days in ITU	Days in Hospital	Significant Events
27	28+4	27	GA	248	9	6	15	SVT, delirium
38	31+4	40	GA	258	1	2	12	nil
40	26	38	GA	303	53	57	70	headache, photophobia, delirium, tracheostomy
30	34+2	27	GA	298	1	4	10	nil
36	28+6	26	GA	288	56	64	88	tracheostomy
28	31+5	29	GA	189	2	6	14	nil
35	40+2	43	Spinal	224	21	23	24	died
20	36+6	31	Spinal	273	3	9	16	nil
25	40+3	43	Spinal	231	15	15	17	died
31	31+5	31	Spinal	240	8	8	12	nil

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P.21 A multidisciplinary safety checklist to facilitate continuous fetal heart monitoring during labour epidural analgesia insertion

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Introduction: Disruption to fetal monitoring during epidural insertion has been highlighted as a concern nationally [1,2]. Additionally, a Healthcare Safety Investigation Branch review of a case at our institution, recommended that staff follow guidance to achieve continuous fetal monitoring during epidural insertion. Multidisciplinary team (MDT) checklists such as the theatre WHO checklist encourage effective communication and act as cognitive aids to perform key safety checks. A literature search found no checklists that address continuous fetal monitoring or MDT communication during labour epidural insertion. Our aim was to introduce a MDT safety checklist to be completed before epidural insertion, focusing on continuous fetal monitoring, communication and flattening any MDT hierarchy.

Methods: A MDT of anaesthetists, midwives and obstetricians, devised a 6-point checklist to address critical safety steps. This was ratified at the local perinatal safety forum and instructions provided to the MDT. Checks addressed a recent 'fresh eyes' review, clinical appropriateness of epidural insertion, continuous fetal monitoring and MDT communication. A one-month pilot was undertaken, during which the checklist was read aloud at the bed space before epidural insertion and actioned upon if necessary. All members of the MDT and the parturient (\pm birth partner) were asked to anonymously complete a feedback questionnaire.

Results: 68 labour epidurals were sited over the pilot period. Feedback was captured from 56 MDT members with equal spread of anaesthetists (34%), midwives (32%) and operating department practitioners (34%). 49 (88%) of responses felt the checklist encouraged MDT

communication and 47 (84%) felt that the checklist increased parturient and fetal safety. Free-text feedback identified that staff felt the checklist helped them to voice concerns. Feedback was captured from 20 parturients/birth partners. 19 found the checklist reassuring (95%). No parturients reported increased anxiety.

Discussion: This MDT checklist has been successfully piloted and has achieved its aims. Whilst it is not possible to directly measure the checklist's impact on morbidity or mortality, it has the potential to improve maternal and fetal outcomes. Following MDT discussion and review, our institution has decided to embed this checklist into routine practice for the benefit of staff, parturients and babies.

1	Has the 'Fresh eyes' review been completed recently?	YES	NO
2	Is it appropriate for an epidural to be sited on the basis of the clinical picture & CTG recording via abdominal transducer or FSE?	YES	NO
3	Is IV access patent & fluid attached?	YES	NO
4	Is there a good quality, continuous recording of the fetal heart (CTG via abdominal transducer or FSE)?	YES	NO
5	Midwife agrees to advise anaesthetist if good quality continuous fetal monitoring cannot be maintained throughout	YES	NO
6	Anaesthetist agrees to interrupt epidural insertion, when safe, to facilitate good quality continuous fetal monitoring	YES	NO

Figure: MDT checklist to facilitate continuous fetal monitoring during epidural insertion.

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