



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Anaesthetics, Liverpool Women's Hospital, Liverpool, UK

Introduction: The benefits of regional anaesthesia (RA) compared to general anaesthesia (GA) for caesarean delivery (CD) are multi-faceted not least in reducing the impact on maternal and neonatal mortality. Ineffective RA for CD may result in supplementary analgesia or conversion to GA. This audit evaluated our service against the set standards published the RCOA in their audit recipe book.¹

Methods: We audited all patients having a CD at our institution during February 2020. Data included category of CD, anaesthetic technique, conversion rate, additional analgesia administered, rationale for techniques and grade of both anaesthetist and surgeon.

Results: 178 patients were included. Primary GA was performed in 8% of cases. RA was attempted in 92%, although 6.7% required conversion to GA. Intra-operative conversion occurred in 4 patients (2.2%). 92% of RA to GA conversions occurred out-of-hours. 9.5% of patients complained of pain during CD; the majority were managed with simple analgesia and/or IV opioid. 76% of reported pain was when a junior anaesthetist had performed the RA. 91% of category 1 CD patients were anaesthetised by junior anaesthetists and the primary surgeon was a trainee 100% of the time.

Table: Anaesthesia for caesarean delivery

	Cat 4 (%)	Cat 1-3 (%)	Cat 1 (%)
CD carried out with RA	94 (>95%)	81 (>85%)	9 (>50%)
Pain during CD	8 (<5%)	11 (<15%)	0 (<20%)
RA to GA conversion	1 (<1%)	12 (<5%)	9 (<15%)

RCOA standards shown bold.

Discussion: This audit suggests we fell short of best practice, however it highlights the balance of risk vs benefit that faces obstetric anaesthetists. RCOA standards state 50% of category 1 CD should be carried out under RA, up to 19% of patients may experience pain and 14% may undergo conversion to GA. Most category 1 CD in this audit had a GA and occurred out-of-hours. Although this falls short of the RCOA standard, we had no incidence of pain, intra-operative conversion, post-natal complaints or clinical incidents secondary to GA. A question often asked but somewhat difficult to answer is this: Is the risk of a GA from the outset for a category 1 CD less than the risk of inflicting distress as a result of intra-operative pain and/or conversion, and is the risk of a GA before surgery, not less than the risk of converting during? Efforts to promote RA within the obstetric multi-disciplinary team, to ensure trainees regularly check efficacy of epidurals and improve management of patient's expectations have been made. The use of 2% lidocaine/adrenaline for epidural top-up has been introduced and recent data show a fall in our GA rates to 2.5%.² All complaints of pain were taken seriously and it is reassuring to know the large majority were managed with paracetamol, Entonox and/or IV opioid.

References

- [1]. The Royal College of Anaesthetists. Raising the standard: a compendium of audit recipes. 3rd ed.; 2012..
- [2]. Bhatia K, Columb M, Belway A et al. The effect of COVID-19 on general anaesthesia rates for caesarean section. A cross-sectional analysis of six hospitals in the North-West of England. *Anaesthesia*.2020 Oct 18. doi: 10.1111/anae.15313. Epub ahead of print. PMID:33073371..

doi:10.1016/j.ijoa.2021.103037

P.40 An audit of anaesthetic practice and associated neonatal outcomes for category 1 caesarean sections during the initial wave of the COVID-19 pandemic

N. Ledlie*, O. Mohammed, S. Dondapati, R. Akhtar

Anaesthesia, Royal Stoke University Hospital, Stoke-on-Trent, UK

* Corresponding author.

Introduction: At the onset of the global pandemic of COVID-19, significant changes were necessary to ensure the safe practice of obstetric anaesthesia. We carried out a retrospective comparative survey over the time period 1 April to 15 May 2020 and compared it to the same time period from 2019 in our tertiary centre (6800 deliveries/annum; caesarean section (CS) rate of 34%). Our primary objective was to audit the change in anaesthetic practice and its impact on the decision to delivery interval (DDI) and neonatal outcomes for category 1 CS.

Methods: Anaesthetic information for all category 1 CS performed in these two interval periods was retrieved from hospital electronic records. Method of anaesthesia, total DDI and Apgar scores at 1 and 5 min were noted.

Results: During the 2020 period there were 33 category 1 CS. Of these 29 had regional anaesthesia (RA) and 29 (88%) delivered within the 30 min DDI. During 2019 there were 20 category 1 CS. Of these 10 were under a RA and 14 (70%) delivered within the 30 min DDI.

Table: DDI and neonatal outcome

Year	2019	2020
Number category 1 CS	20	33
Number of GA	10	4
Mean DDI (min)	28.3	23.0
Mean Apgar score at 1 min for GA	7.3	9
Mean Apgar score at 5 min for GA	8.5	9.5
Mean Apgar score at 1 min for RA	7.8	8.07
Mean Apgar score at 5 min for RA	9	8.97

Discussion: Though RA is the preferred choice of anaesthetic for all CS the arbitrary 30-min rule has been adopted by professional bodies. This makes GA the frequent choice of anaesthetic for category 1 CS due to its speed despite its inherent dangers. However, recommendations during the pandemic advised RA for all except the most urgent cases to reduce the associated risks of GA.¹ We have shown that the COVID-19 pandemic caused a significant change in practice away from general anaesthesia for category 1 CS. Regional anaesthesia accounted for 88% of category 1 CS in 2020 compared to 50% in 2019. The factors affecting this are likely to include recommendations about avoiding GA in potential COVID-19 patients, increased on-site consultant presence and concerns the use of personal protective equipment in GA may cause delays. Despite this move away from GA there was an improvement seen in the percentage of cases completed within the 30 min DDI and also similar Apgar scores for the two time periods. This raises the question of whether more category 1 CSs could be carried out with regional anaesthesia without any change in neonatal outcome.

References

- [1]. OAA, FICM, ICS, AOA, RCOA Management of pregnant women with known or suspected COVID-19,2020. <https://icmanaesthesiacovid-19.org>.

doi:10.1016/j.ijoa.2021.103038

P.41 Assessing and predicting adequacy of discharge analgesia after caesarean section

G. White^{a,*}, S. Brown^b, P.D. Wild^b

^a *Anaesthetics, Ayrshire Maternity Unit, Kilmarnock, UK*

^b *Pharmacy, Ayrshire Maternity Unit, Kilmarnock, UK*

* Corresponding author.