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Trainee exposure to general anaesthesia for caesarean section

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Introduction

It has long been questioned whether anaesthesiology trainees are receiving adequate exposure to general anaesthesia for caesarean sections (GA CS). [1]

In 2020, the College of Anaesthesiologists of Ireland published their revised training curriculum which stipulated that trainees should be involved in the provision of anaesthesia in at least 2 cases of caesarean section under general anaesthetic. [2]

We sought to examine whether trainees were meeting this minimum number of GA CS during their 6 month obstetric rotation at our institution and to compare whether there was a significant difference in the numbers experienced by trainees in 2009 versus 2019 versus 2020 including the first wave of the Covid-19 pandemic.

Methods

Following approval by our hospital audit committee, details of all patients who received a general anaesthetic for caesarean section for 3 x 6 month rotation periods in 2009, 2019 and 2020 were extracted from the hospital IT system.

A retrospective chart review was conducted and each trainee present at the GA CS was recorded. If more than one trainee was present, both were recorded in the figures.

Data was collected in Microsoft Excel and analysed using SPSS.

Results

42 out of 43 (98%) trainees were exposed to at least 2 GA CS. One trainee was exposed to no GA CS.

The number of women delivered decreased by 17% from 4438 in the six month period in 2009 to 3665 in 2020. There was a 31.9% increase in the caesarean section rate over the equivalent period from 25.7% to 33.9%.

The rate of GA CS was 3%, 2.9% and 3.4% in 2009, 2019 and 2020 respectively.

The mean number of GA CS that each trainee was exposed to was 4 in each of the 3 periods.

	2009	2019	2020
No of trainees	10	16	15
Women delivered	4438	4077	3665
Caesarean section	1145	1359	1244
Caesarean section rate	25.7%	33.3%	33.9%
GA CS (% of all CS)	34 (3%)	40 (2.9%)	42(3.4%)
GA CS per trainee [range]	4 [2-7]	4 [2-8]	4[0-6]
Trainees not meeting standard	0	0	1

Discussion

Despite a 50% increase in the number of trainees in the department from 2009 to 2020, we have seen no difference in the mean number of GA CS that each trainee is exposed to. This can partially be accounted for by the significant increase in the rate of caesarean sections over the same time period (p=<0.00001) while there was no significant difference in the proportion of GA CS (p=0.782).

Interestingly, there was an increase in the number of GA CS during the period of the first wave of the Covid-19 pandemic which was in contrast to the experiences of some units in the UK.[3] The pandemic had no influence on the mean number of GA CS per trainee.

Our unit has recently introduced multidisciplinary simulation training to increase the number of GA CS scenarios such as failed intubation that trainees experience. We also attempt to assign GA requiring elective CS cases to those trainees who have not yet experienced a GA CS in an emergency situation. Ongoing review of our trainee exposure to GA CS is required.

References

1. Johnson RV, Lyons GR, Wilson RC, Robinson AP. Training in obstetric general anaesthesia: a vanishing art? Anaesthesia 2000; 55: 179-83.

2. College of Anaesthesiologists of Ireland. Curriculum for the National Specialist Anaesthesiology Training Programme, 2020. (accessed 4 February/2021).

3. Bhatia K, Columb M, Bewlay 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 2021; 76: 312-9.