Obesity in pregnancy: audit into anaesthetic service provision

Dr William Turner & Ms Nuala Coyle

Epsom and St Helier University Hospitals NHS Trust

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Introduction

Obesity in pregnancy is an increasingly common occurrence, with prevalence increasing from 9–10% in the early 1990s to 16–19% in the 2000s.

Obesity in pregnancy is defined as a Body Mass Index (BMI) above 30kg/m^2 at the time of booking and is associated with increased foetal and maternal morbidity, including increased rates of caesarean section and postpartum haemorrhage; BMI >30kg/m^2 being recorded in 37% of maternal deaths and 18% of PPH.

It is recommended that all women with a BMI above 30 should be provided with accurate information about the risks associated with their pregnancy, their options for analgesia and anaesthesia at delivery.

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Aim & Objectives

Evaluation of provision of anaesthetic services for mothers with BMI >40 kg/m^2.

Methods

Targeted retrospective review of patient's notes using Badgernet, collecting data for mother's with booking BMI > 40 kg/m^2.

Time of admission was recorded as time admitted to labour ward.

Time to cannulation was recorded as first notation of cannula insertion. *Anaesthetist informed in a timely fashion* was noted as the duty anaesthetist being informed within six hours of admission to labour ward

Elective caesarean sections were not included in the time to cannulation analysis.

50 mother's notes from March 2019 to March 2020 were analysed.

Mathematical and graphical analysis using excel.

Proposed Indicators and Best-Practice Standards

1. Women with a booking BMI ≥40 kg/m^2 have an antenatal anaesthetic review and plan
2. The duty anaesthetist should be informed when women with a BMI ≥40 kg/m^2 are admitted to the labour ward.
3. Women with a BMI ≥ 40 kg/m^2 have venous access established in a timely fashion prior to delivery.

I. 90% of women with a booking BMI ≥ 40 have an antenatal anaesthetic review and a plan in the notes.

II. 90% of women with a BMI ≥ 40 kg/m^2 have venous access established in a timely fashion prior to delivery.

III. 90% of women with a BMI ≥ 40 kg/m^2 have documentation in the notes stating that the duty anaesthetist was informed of her presence on the labour ward.

Results

50 sets of notes were analysed against the detailed standards

Of the fifty patients reviewed, 33 had a documented anaesthetic pre-assessment clinic, with 17 not being reviewed antenatally in an anaesthetic clinic

Anaesthetic pre assessment	
Yes	No
33	17
66.00%	34.00%
n=50	

The average time to cannulation was 10.1 hours

The anaesthetist was informed of the patients' arrival in only 14% of cases.

Anaesthetist informed		
Yes (not for LSCS)	Yes (elcs)	No
7	10	33
14.00%	20.00%	66.00%
n=50		

Conclusions

Standards were not met in any analysed metric:

There are multiple reasons for patients note receiving ante-natal clinic visits, including availability of clinic time/capacity and patient non-attendance.

66% is far below the stablished standard of 90%

The duty anaesthetist was informed in only 14% of cases, which is a fraction of the recommended 90%. While there are multiple reasons for not informing the duty anaesthetist, including labour ward or anaesthetist workload, the reason for the lack of notification may be a product of a lack of documentation from both receiving midwifery/obstetric or anaesthetics teams.

The prolonged time from admission to cannulation, of over 10 hours on average may again be a product of a lack of documentation. The range of first documented cannula was between 0.3 hours and 30 hours, with a median value of 10.1 hours and a mean value of 7 hour.

Recommendations

An evaluation of anaesthetic pre-assessment clinics to further understand why the percentage of patient's attending these clinics was only 66%.

Team education as to the importance of informing the duty anaesthetist as well as an emphasis from the anaesthetic service to review and document for all bariatric mothers.

In addition to this, further education of the labour ward teams as to the importance of early cannulation of all bariatric mothers, as well as the need to document the time of insertion of each cannula.

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