Case Report: Multidisciplinary management of a patient with super-morbid obesity including the use of dural puncture epidural (DPE) for labour

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Key Messages

1. *Dural puncture epidural provided effective, rapid-onset labour analgesia and was successfully converted to regional anaesthesia in a patient with BMI 66kg/m²*
2. *Multidisciplinary preparation for bariatric obstetric care contributed to safe management*



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Case report:

- A 31-year-old nulliparous woman with a booking BMI of 66 kg/m² was seen in the high-risk antenatal anaesthetic clinic.
- An individualised anaesthetic plan was agreed and disseminated to the multidisciplinary maternity team.
- The unit's capability to provide safe care was assessed, ensuring appropriate equipment was available and staff were trained in its use.
- The patient was admitted at 38/40 for a planned induction of labour.
- Pre-procedural ultrasound was used to guide a DPE in early labour. This resulted in a rapid onset, symmetrical analgesic block, which was maintained by patient controlled epidural analgesia.
- After 18 hours, a category 2 caesarean section was performed, following the development of concerning CTG features.
- Two anaesthetic and obstetric consultants were present along with senior midwives.
- An arterial line was inserted and HFNO applied pre-emptively.
- The epidural was used to provide surgical anaesthesia and a 2.7kg infant was delivered in good condition.
- There were no perinatal complications and the patient reported good levels of satisfaction.

Discussion:

- Obesity currently affects 23.1% of obstetric patients in the UK[1] and is associated with increased risk of adverse outcomes.
- This case demonstrates the careful multidisciplinary preparation required for patients with a very high BMI.
- We found that video-conferencing was a very efficient tool for discussing the detailed anaesthetic plan within our department.
- The DPE technique was chosen for the following reasons:
  - Potential to reduce risk of failed or asymmetric block
  - Reduced risk of fetal bradycardia associated with traditional CSE in labour[2]
  - Overriding aim of avoiding a high-risk emergency general anaesthetic.
- We look forward to the results of upcoming prospective trials comparing outcomes for DPE compared with standard epidural techniques in this patient group.

References:

1. Denison F.C. Aedla N.R. Keag O. et al. Care of women with obesity in pregnancy: green-top guideline no. 72. *BJOG.* 2019;126: 62-106. https://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg72/.

2. Chau A. Bibbo C. Huang C.C. et al. Dural puncture epidural technique improves labor analgesia quality with fewer side effects compared with epidural and combined spinal epidural techniques: a randomized clinical trial. *Anesth Analg.* 2017; 124: 560-569