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Use of spinal prilocaine in obstetric anaesthesia

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Introduction

Intrathecal hyperbaric pilocaine provides rapid onset and intermediate duration regional anaesthesia. Patients can usually be discharged within 4 hours of administration giving it an important role in day case surgery settings[1]. These properties are also advantageous in the obstetric setting to allow earlier mobilisation and discharge from hospital. We conducted a quality improvement project in the obstetric department of our hospital to investigate if its use for specific obstetric procedures is effective, associated with reduced rates of urinary catheterisation and earlier discharge from hospital. The procedures chosen were: cervical suture, manual removal of retained placenta and repair of perineal tears.

Methods

The project started in April 2018 and data collection ended in July 2019. A guide for the use of hyperbaric prilocaine spinal anaesthesia in obstetrics was introduced. The use of prilocaine spinal was not mandatory and its use was left up to the clinicians involved in the patients' care. If a prilocaine spinal was used anaesthetists and midwifes were asked to fill in an audit form. For those patients where an audit form was not completed the clinical notes were retrospectively reviewed.

Results

A total of 61 patients who received prilocaine spinals were identified. Notes or audit forms were not located for 12 patients and 1 patient was excluded due to intrathecal opioid use. The remaining 48 patients were included in our analysis of whom 4 had cervical suture (insertion or removal), 18 had manual removal of placenta and 26 had repair of perineal tears.

Efficacy of Prilocaine spinal: 31.9% patients had a block appropriate for procedure within 5 minutes of spinal and 75.5% within 10 minutes (21.3% cases did not document time of onset). There were no cases of failed spinal or conversion to GA. When level of comfort was documented 100% were comfortable throughout their procedure. Degree of comfort was not documented for 8 patients, however these patients did not receive additional analgesia during their procedure. Vasopressor use was low (16.7% had vasopressors, use was not clear in 4.1% of cases). Patients did not receive local anaesthetic to the perineum pre-procedure but rather it could be considered upon completion for post-operative analgesia.

Catheterisation rate: 81.2% patients were not catheterised; of these one developed urinary retention. 18.8% patients were catheterised for reasons including to monitor fluid balance, complex perineal tears and urinary retention pre-procedure.

Time to discharge: 23.1% of patients who were not catheterised went home the same day and 2.6% went home the morning after a procedure in the middle of the night within 12 hours of their procedure.

Hyperbaric 2% prilocaine spinal guide

Indications for use:
- Simple 3rd degree perineal tears
- Manual removal of placenta (MROP)
- Cervical sutures

Bladder care:

In-out catheter should be encouraged unless there is a clinical reason for a longer period of catheterisation. If the patient has not been catheterised midwifes should follow the trust clinical guideline for bladder care. If the patient has been catheterised obsetricians will arrange appropriate time for TWOC.

Anaesthetists:
- 3mls (60mg) for perineal tears & MROPS
- 2mls (40mg) for cervical sutures

Obstetricians:
- consider benefit of local anaesthetic to perineum (discuss dose with anaesthetist)

Appropriate post-op analgesia on drug chart

2% heavy prilocaine will give approximately 75-90 minutes of block duration at a reliable T8-T10 level. If the procedure is likely to take more time than this then bupivicaine may be more appropriate. The anaesthetist must be happy to give a prilocaine spinal and a discussion with the obstetrician prior to the procedure should be done to establish the complexity of the case.

Discussion

Prior to the introduction of prilocaine spinals for MROPs, perineal tears and cervical sutures standard care was intrathecal 0.5% hyperbaric bupivicaine, with varying use of intrathecal opiate, and a urinary catheter sited for 12 hours. This resulted in obstetric patients who had otherwise had a normal vaginal delivery staying in hospital for longer than they otherwise may have. We have found that prilocaine spinals for MROP, perineal repairs and cervical sutures is a safe, effective and practical way of delivering regional anaesthesia. We show that prilocaine spinals give a reliable block without routine use of vasopressors or additional analgesia intra-operatively. We demonstrate that the vast majority of patients do not require a urinary catheter and when they do it is for complications of labour & delivery. We also demonstrate that a reasonable proportion of women leave hospital sooner when they receive a prilocaine spinal than they would have done previously.

Obstetric patients requiring these procedures and have no other reason to stay in hospital may benefit from prilocaine spinals to facilitate lower catheterisation rates and earlier discharge from hospital. From this experience we have adopted prilocaine spinal as part of routine care we provide our obstetric patients.

References

1. Rattenberry W, Hertling A, Erskine R. Spinal anaesthesia for ambulatory surgery. BJA education 2019; 19:321-8.8