satisfied when using remifentanil PCA. This can be explained by the fact that a good birth experience is not solely dependent on complete analgesia. In a large-scale survey of over 14,000 parturients, women found complete analgesia less important. More important was that they were involved in decision making, that they felt well looked after by the midwife, that their expectations were met and that they could receive analgesia promptly once they decided for it. Remifentanil PCA meets these criteria well. It can be quickly installed; it guarantees close supervision by the midwife; and the labouring woman can decide herself how she wants to deal with pain. The parturient can use the PCA button as frequently as she wants and she can switch to other methods, like an epidural, at any time. The expectations of labouring women are also dependent on the cultural and personal environment and their personality. To meet these expectations, careful information about the benefits and the limitations of the remifentanil PCA and the other analgesic methods is of great importance and an integral part of the birth plan and the informed consent. Women should have the choice.

In summary, the question of whether remifentanil PCA should be used in obstetrics no longer arises today, as the advantages are visible and well documented in daily clinical practice. Remifentanil PCA can substitute long-acting opioids which are far from optimal for mother and child in active labour and it can efficiently replace an epidural if necessary. In addition, parturients benefit from continuous care by the midwife.

It is a matter of ensuring that quality standards are set and maintained correctly and that the method itself is constantly improved. This has been done for epidurals since the 1980s and for the remifentanil PCA since 2005. With both methods, there are still many questions to be answered. The basis for continuous improvement of every method is research on the one hand and transfer of new knowledge into the clinical environment on the other hand. The RemiPCA SAFE Network developed an Internet supported quality management system as early as 2009 with the aim to continuously improve the remifentanil PCA as a method itself and support very different international hospitals, from small regional to large teaching hospitals, in safety and quality management. As with every medical treatment, what matters for safety is the responsible environment on the other hand. The RemiPCA SAFE Network one hand and transfer of new knowledge into the clinical continuous improvement of every method is research on the other hand and transfer of new knowledge into the clinical continuous improvement of every method is research on the other hand. The RemiPCA SAFE Network (2010–2015). Int J Obstet Anesth. 2015 Nov;24(4):313–22. doi: 10.1016/j.ijsa.2015.06.003. Epub 2015 Jun 18. PMID: 26303750.


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ropivacaine 0.16% was started, with an optional bolus of 3 ml with a lockout of ten minutes. Thirty minutes after placement of the epidural catheter the new-born was delivered and the epidural infusion was stopped. Due to a retained placenta the patient was booked for a manual placenta removal in the operating theatre.

With an unknown COVID status, no significant medical history (G4P3A0) and a previously sited epidural catheter the decision was made to perform the procedure under epidural anaesthesia. After an injection of 4 ml of a 7.5% ropivacaine solution, the patient reported a scratching sensation in the ears followed by dizziness and hypotension of 66/45 mm Hg. The injection was immediately ceased and the anaesthetist attempted to aspirate the injected solution via the epidural catheter which showed blood in the epidural catheter.

**Diagnostic and therapeutic management** The anaesthetist assessed the patient employing the ABCD approach as suggested in the BARA guidelines regarding a possible local anaesthetic systemic toxicity (LAST) and determined that apart from a brief hypotensive episode (blood pressure of 66/45 mmHg with a mean of 55 mmHg) and the mild neurological symptoms (scratching sensation in combination with dizziness), there were no other (severe) symptoms reported.

Although the patient in this case presents itself with atypical symptoms i.e. a scratching sensation in the first place followed by dizziness, the timing of the symptoms alerted the anaesthetist to suspect LAST and cease the epidural injection and follow-up with an ABCD approach to further assess the severity of possible LAST.

Prodromal clinical signs of LAST include perioral numbness, tinnitus, agitation, dysarthria and confusion; which can deteriorate into more severe symptoms that warrant (early) treatment with the antidote (Intralipid®) as stated by the Bara into more severe symptoms that warrant (early) treatment with the antidote (Intralipid®) as stated by the aforementioned BARA guidelines. Since the patient remained hemodynamically stable after the event in the absence of any severe (neurologic) symptoms, no further treatment was deemed necessary and the procedure was performed under general anaesthesia with a rapid sequence induction and endotracheal intubation. Patient was postoperatively discharged from the postoperative anaesthesia care unit (PACU) without any major issues.

**Timeline**

Abstract SP44 Figure 1

**Discussion** This case illustrates how a previously sited epidural catheter doesn’t guarantee an evident viable mean for anaesthesia. A standardised approach is necessary to check whether the epidural catheter is (still) correctly positioned before using it for an epidural anaesthesia.

Firstly the importance of documentation needs to be highlighted as well, since a previous account of an ineffective epidural catheter could already indicate a possible malposition; in this case apart from basic documentation there was no description of ineffective analgesia nor any evidence of a misplaced catheter. The aforementioned elements have been outlined as well as recommendations for effective documentation in regional anaesthesia in a recent publication. Secondly after a period of administered epidural analgesia, a brief clinical exam could be used to assess the effectiveness in relation to possible sensorimotor block.

Finally a test dose can be employed to rule out if the catheter is in an intravenous or intrathecal position and even in rare cases that a previously sited one doesn’t migrate in such a position which has been reported. What seems to be trivial, isn’t common practice according to a survey among British obstetric anaesthetists regarding an epidural top-up for an urgent C-section with a previously sited catheter.

However the epidural test dose has been a source of controversy for a long period, the classical regime of 45–60 mg of lidocaine or 7–15 mg bupivacaine in combination with 15g of epinephrine has several limitations for example the possible detrimental effects of epinephrine on the placental perfusion and the possible false positive result for intravenous placement attributed to the maternal heart rate variability during labour.

The lack of prospective randomised trials regarding an epidural test dose regimen in parturient patients has been addressed in a review published in 2009, whereas a recent review in 2019 points out that there is still no consensus on the employment of a test dose regimen and steers away from the test dose altogether in favour of a fractionated regimen of the therapeutic dose.

In conclusion, this case illustrates the importance of a standardised approach to control for epidural catheter misplacement due to the possible severe consequences of inadvertent intravenous injection of local anaesthetics. This approach should encompass a thorough and reliable account of the functionality of the epidural catheter by the anaesthetist who placed it initially as well as a clinical exam and possible test dose regimen before using a previously sited catheter. Regarding the test dose regimen, there still is no consensus, particularly in the parturient, which perhaps might be a subject of further investigations aiming to provide a suitable protocol for confirming correct catheter placement in obstetric patients receiving epidural anaesthesia.

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