



## 277-Pudendal nerve block vs usual lidocaine infiltration for pain relief in episiotomy repair : a comparative prospective study

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**Objective:** we aimed to compare the anesthetic and analgesic effect of the pudendal nerve block (PNB) and of the local lidocaine infiltration during episiotomy repair and in the following 24 hours.

**Methods:** After the approval of the local ethics committee and informed consent, we conducted a prospective, randomized, controlled, double-blind study. 70 parturients undergoing natural birth requiring episiotomy and presenting contraindication or refusal of epidural analgesia were randomized to receive PNB with ropivacaine or local lidocaine infiltration. We used the method of sealed envelopes. After delivery and before episiotomy repair, an operator took aleatory an envelope and prepared the syringe according to it. The 70 participants were randomized into equal two groups.

-Group R : unilateral PNB was performed on the episiotomy side with a nerve stimulator, 15ml of ropivacaine 0.75% were injected.

-Group X: the wound line was infiltrated with 10 ml of lidocaine 2%.

The practitioner in charge of performing the technique and the assisting nurse were the only unblinded persons. A second anesthetist, responsible for the documentation of outcomes, had access to the labour room after the injection. The parturient wasn't able to distinguish between the two techniques.

For both techniques, episiotomy repair started 20 minutes after the injection. Parturients were admitted for 2 hours after delivery in the labor room and for a minimum of 24 hours in the post-partum unit.

The main endpoint was: evaluation of obstetric analgesia by visual analogical scale. The secondary judgment criteria were: hemodynamic parameters, suture duration, onset time of sensory block, time to first analgesic request, rehabilitation parameters, parturient and obstetrician satisfaction and pain intensifying factors.

**Results:** Demographic parameters were similar in both groups. Mean VAS pain score was significantly lower in pudendal group versus infiltration group at T10min (10 minutes after local anesthetic injection) ( $7.20 \pm 8.56$  vs.  $20.43 \pm 18.25$ ,  $p < 0.01$ ), T15min ( $5.43 \pm 8.17$  vs.  $17.71 \pm 16.42$ ,  $p < 0.01$ ), T20min (repair starting) ( $29.63 \pm 23.59$  vs.  $44.06 \pm 28.16$ ,  $p = 0.023$ ), T1h ( $13.14 \pm 19.18$  vs.  $32.20 \pm 21.25$ ,  $p < 0.01$ ), T1h30min ( $10.57 \pm 14.74$  vs.  $27.34 \pm 16.74$ ,  $p < 0.01$ ) and T2h ( $9.57 \pm 15.69$  vs.  $25.34 \pm 16.32$ ,  $p < 0.01$ ), T6h ( $13.57 \pm 14.07$  vs.  $41.43 \pm 23.24$ ,  $p < 0.01$ ), T12h ( $22.60 \pm 20.41$  vs.  $36.49 \pm 23.35$ ,  $p = 0.010$ ) and T18h ( $12.23 \pm 11.84$  vs.  $27.94 \pm 23.40$ ,  $p < 0.01$ ) (Figure 1, 2 and 3). Significantly shorter average suture time and better obstetrician's satisfaction were observed in pudendal group. Nevertheless, parturient satisfaction did not reveal significant difference in our study, as well as time to first analgesic request.

Figure 1. VAS in the labor room

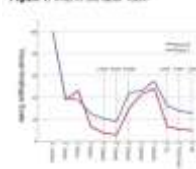


Figure 2. Static VAS in the post-partum unit

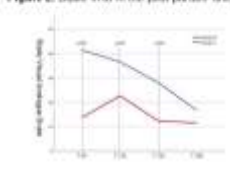
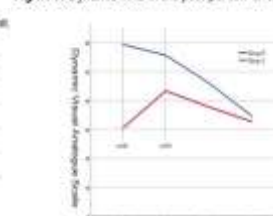


Figure 3. Dynamic VAS in the post-partum unit



### Discussion

Episiotomy is practiced in 60% to 70% of natural births in the general population. Perineal infiltration with a local anesthetic (LA) is the most commonly used technique for pain management during episiotomy repair[1] due to its effectiveness, safety and ease of use, however intra wound multiple injections

remains a painful and unaccepted procedure suggesting to think about alternative techniques. PNB is performed with a single puncture of intact skin [2] ensuring anesthesia of an entire nerve territory. Epidural analgesia is the gold standard for labor pain management[3,4]. Yet the PNB still has a place even in the presence of epidural catheter, thanks to its ability to reduce LA doses and minimize side effects. Our study offers an interesting alternative for parturients women who unfortunately can't have epidural analgesia (in case of contraindication or refusal).

The use of neurostimulation in PNB offers more precision in the treatment of episiotomy's repair. This pain is known to be very intensive and causes a major discomfort even in the long term.

**Conclusions:** Episiotomy is associated with significant pain. Nerve stimulator guided PNB proved to be more effective for pain management in episiotomy repair than the classical lidocaine infiltration. Both techniques appear to be safe and unharmed but PNB provided superior analgesia with less need for supplemental analgesia even in the postpartum period.

### References

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