

# Incidence of Post-Dural Puncture Headache after Combined Spinal or Dural Puncture Epidural: Does Size of the Spinal Needle Matter?

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## INTRODUCTION

- Post-dural puncture headache (PDPH) is an adverse event commonly seen in obstetric patients following neuraxial anesthesia.
- There is limited data and conflicting evidence when comparing PDPH rates between 25 vs 27 G spinal needles for CSE or DPE.
- Our aim was to determine if there was a difference in PDPH occurrence rate between 25 vs 27 G spinal needles used during CSE or DPE for labor analgesia.



## METHODS

- Retrospective chart review of all parturients receiving neuraxial analgesia (n=10,459) between 2019 and 2022 at Mount Sinai West.
- The occurrences of PDPH in patients without a documented inadvertent dural puncture were identified through custom search queries, based on symptoms and medications used.
- Those identified records were then reviewed to confirm a clinical diagnosis of PDPH.



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|                              | 25G (n=3,564)   | 27G (n=6,895)  |
|------------------------------|-----------------|----------------|
| <b>Mode of delivery</b>      |                 |                |
| Vaginal                      | 2,962 (78.65%)  | 5,288 (80.16%) |
| Laboring to cesarean section | 602 (21.35%)    | 1,607 (19.84%) |
|                              |                 |                |
| <b>Technique</b>             |                 |                |
| CSE                          | 2,935 (82.35%%) | 6,547 (94.95%) |
| DPE                          | 629 (17.65%)    | 348 (5.05%)    |
|                              |                 |                |
| <b>PDPH</b>                  | 26 (0.73%)      | 28 (0.41%)     |

**Table 1: Mode of Delivery, Technique, and PDPH Incidence**

## RESULTS

- PDPH occurred in 26 patients with a 25 G needle (0.73% incidence) and 28 patients with a 27 G needle (0.41% incidence).
- The odds of developing PDPH in patients without an inadvertent dural puncture were predicted to be 1.8x higher with a 25 G compared to a 27 G needle (OR 1.8; 95%CI 1.06, 3.08, p=0.031).
- The significance persisted after adjusting for type of delivery (vaginal vs laboring to cesarean delivery) (OR 1.76; 95%CI 1.03, 3.02, p=0.038).

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## DISCUSSION

- There is a small statistically significant increased risk of PDPH development with the use of a 25 G spinal needle for CSE or DPE analgesia.
- These risks must be weighed against the clear advantages of utilizing a 25 G needle, especially for DPE.

## REFERENCES

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