



Incidence of accidental dural puncture & post-dural puncture headache during labor analgesia in two-time matched retrospective cohorts



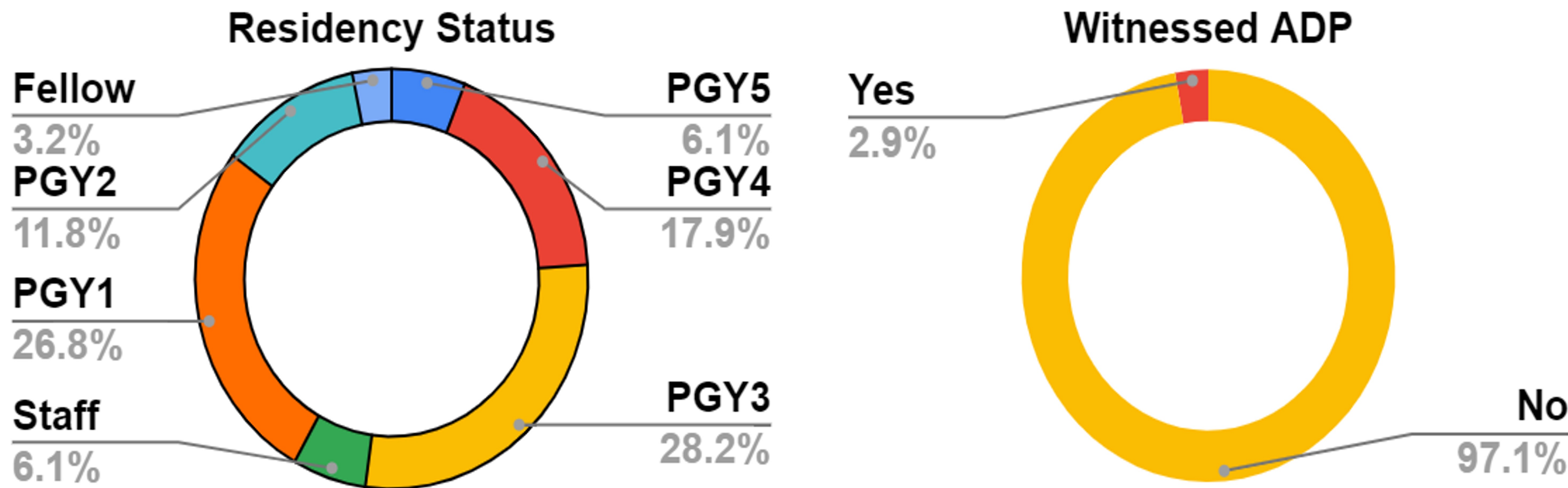
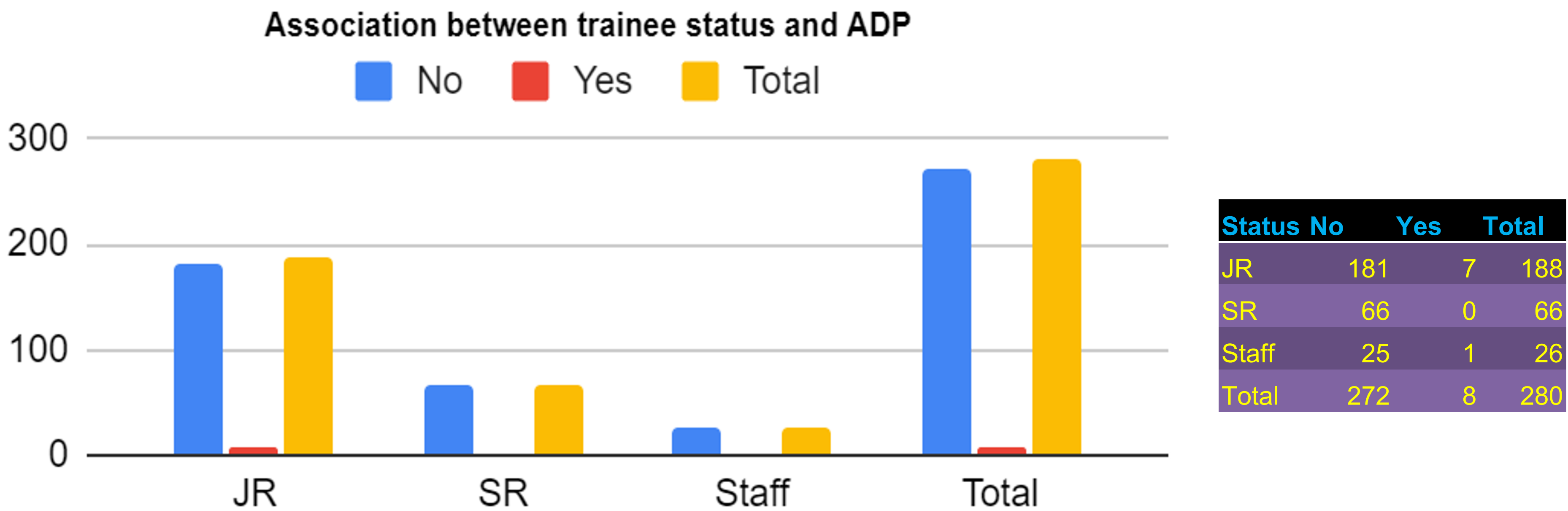
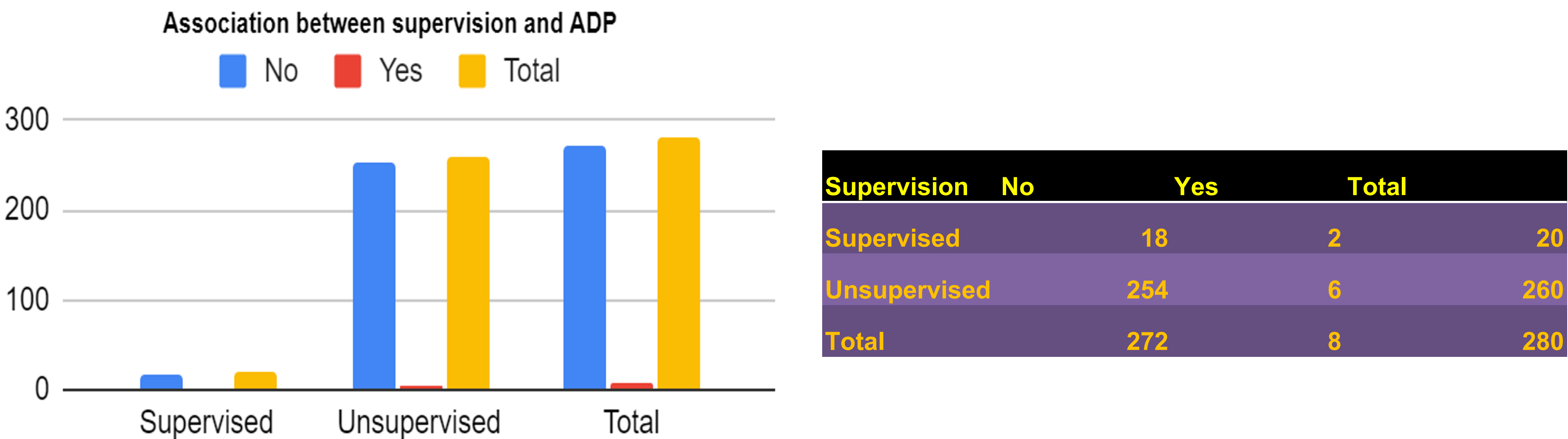
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Introduction

- Recent studies have reported the incidence of accidental dural puncture complicating epidural catheter placement varying 0.9 to 1.3%.
- In UK, Best practice Standards for the provision of labor analgesia have been defined by the National Institute for Health and Care Excellence and the Royal college of Anesthesiologists to be **less than 1%**.

Methodology

- This study was a **retrospective chart review**.
- The study population were all parturients who underwent labor epidurals at our tertiary care referral centre at two different time intervals: **January 01, 2021, to March 31, 2021, and July 1, 2021, to September 30, 2021**.
- These two-time matched cohorts were chosen to look at the impact of new trainees starting in July of 2021.
- Data were extracted by two independent authors. The variables examined were maternal characteristics (age and BMI), experience of the operator, (level of training), supervision, witnessed accidental dural puncture, positive catheter aspiration and the time interval from dural puncture to symptomatology.
- Chi square and student’s t test were used to assess statistically significant differences between the two groups.



Results

- Incidence of ADP in cohort 1 (n=235) = 1.2%**
- Incidence of ADP in cohort 2 (n=280) = 2.5%**
- The incidence of PDPH was 1 in 515 labor epidurals amongst both the cohorts = 0.19%
- The odds of ADP were **3.77** times higher for new trainees compared to trainees who were at their 3rd year of training.

Conclusions

- Traditional methodologies of teaching labor epidural placement to junior anesthesia residents continue to show a significant difference in proficiency between junior and senior trainees.
- It is important for our patients to explore methods for improvement of our education process.
- These could involve increased direct supervision and structured feedback tools, the use of high-fidelity epidural simulation or use of ultrasound imaging .

References

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