

Maternal and perinatal outcomes in placenta accreta spectrum: Planned vs. emergency surgery in a retrospective cohort of 315 cases at a tertiary center

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Objective

- To compare the association between surgical timing (planned vs. emergency) and severe maternal and perinatal morbidity among patients with placenta accreta spectrum (PAS) managed at a tertiary referral center.

Methods

- Design:** retrospective cohort of women with pathology-confirmed PAS (2017–2025).
- Classification:** planned vs. emergency surgery (e.g., brisk bleeding or labor).
- Primary outcome:** severe obstetric hemorrhage (transfusion ≥ 4 PRBC units).
- Secondary outcomes:** maternal ICU admission and neonatal ICU admission.
- Analysis:** crude and adjusted RRs (95% CI) via modified Poisson regression with robust variance, adjusting for maternal age, BMI, previous cesarean deliveries, placenta previa, pre-delivery hematocrit, prenatal ultrasound-based PAS risk, and gestational age at delivery.

Results

- 315 women with confirmed PAS were included; 82.5% planned surgery, 17.5% emergency surgery.
- Severe hemorrhage and NICU admission were more frequent with emergency surgery but did not reach adjusted significance.
- Maternal ICU admission was significantly higher with emergency surgery (aRR 2.13), Figure 1.

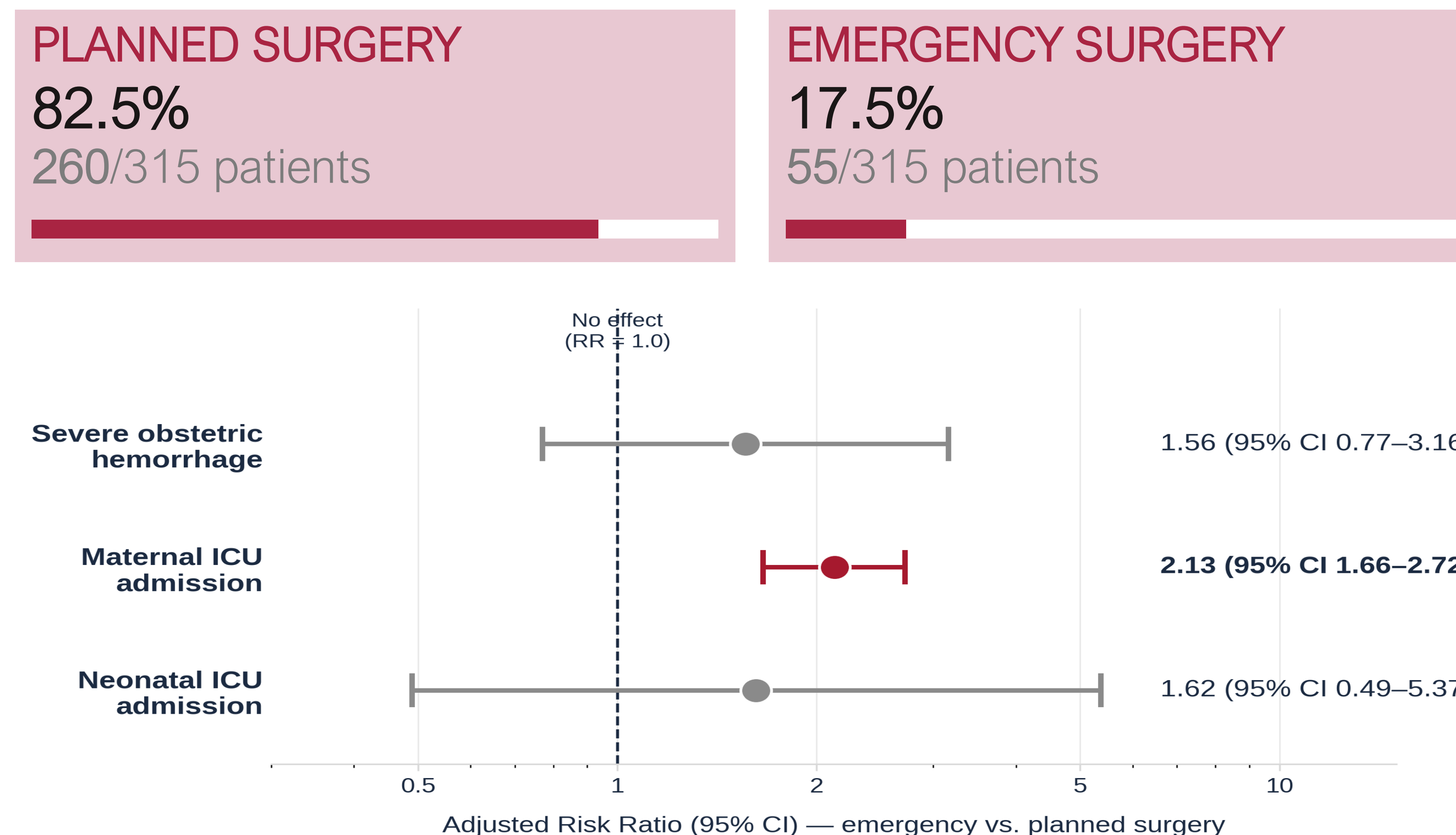
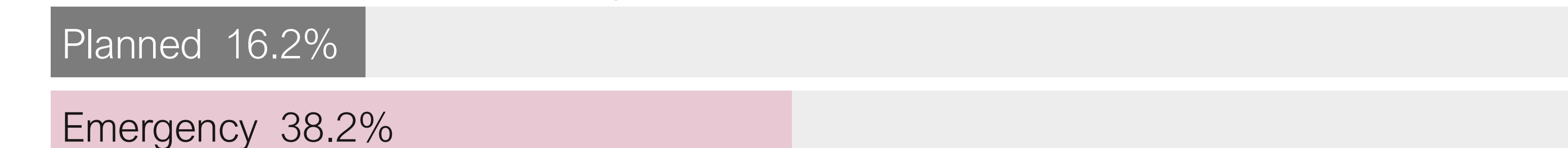


Figure 1. Adjusted risk ratios (aRR, 95% CI) for emergency vs. planned surgery in confirmed PAS (n=315).

OUTCOMES BY SURGICAL GROUP

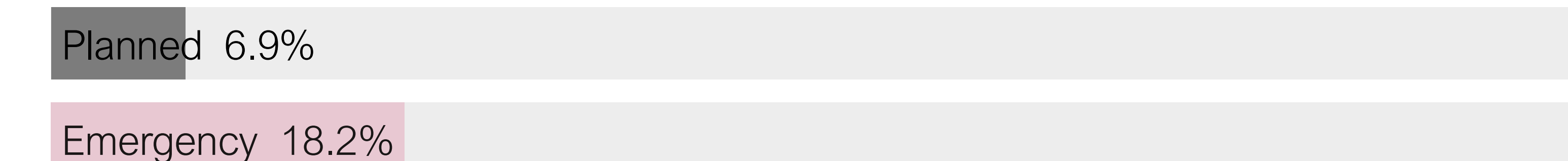
Severe obstetric hemorrhage



Maternal ICU admission



Neonatal ICU admission



Conclusions

- Emergency surgery was associated with a higher adjusted risk of maternal ICU admission.
- These findings underscore the importance of multidisciplinary preparedness for PAS, including in emergency settings.