A retrospective analysis of obstetric anesthesia for post-partum tubal ligation procedures Thomas CL, Nizamuddin SL, Dewey A, Liao CL, Cole NM.

Background

- Postpartum tubal ligation (PPTL) is one of the most common forms of contraception in the USA
 - Urgent postpartum procedure
- Neuraxial anesthesia failure rates are higher in PPTL than cesarean delivery
 - Etiology unknown

<u>Aims</u>

- Evaluate PPTL neuraxial anesthesia failure rates at an academic center serving marginalized populations
- Compare results with published data from peer institution







Methods

		Characteristic	Successful	Successful	All-Block Failure	P-
	Single-center retrospective cohort study (2013-2023) Inclusion: PPTL during same admission as vaginal delivery Exclusion: PPTL with concurrent cesarean delivery; interval PPTL		Epidural Reactivation	De novo Spinal	N= 22	value
			N= 504	N= 23		
		Age (years), mean (SD)	32.4 (4.9)	33.4 (6.0)	32.9 (5.4)	0.60
		Height (cm), median (IQR)	162.6 (157.5-167.6)	162.6 (158-168)	165.1 (163-170)	0.09
		Weight (kg), median (IQR)	85.3 (74.1-98.9)	82.1 (77-91)	76.8 (61-85)	0.04
		BMI (kg/m²), median (IQR)	32 (28-37)	33 (29.5-35.5)	25 (22-32)	0.005
		Gestational age (weeks), median (IQR)	39.7 (38.5-40)	39.1 (38.9-40	39.9 (38.4-40)	0.83
		Gravidity, median (IQR)	5 (4-6)	5 (4-6)	4 (3-7)	0.63
	Primary outcome	Race, N (%)				
		Asian	2 (0.4)	0 (0)	0 (0)	0.97
	Failed neuraxial	Black	391 (77.6)	18 (78.3)	18 (81.8)	
	blockade	White	59 (11.7)	2 (8.7)	2 (9.1)	
		Other	35 (6.9)	2 (8.7)	2 (9.1)	
		More than one race	17 (13.4)	1 (4.4)	0 (0)	





Results



Discussion

<u>Findings</u>

- Neuraxial anesthesia failure rates low for PPTL
- Comparisons with 1 peer institution:
 - All-block failure: 4% vs 16%
 - GA rate: 1.6% vs 5.5%
 - Planned catheter reactivation: 92% vs 23%
- 'Failure' definition, practice variability and/or sociodemographic factors may contribute to differences in neuraxial anesthesia failure rates

Umbilical Sparing:

<u>Limitations</u>

- Retrospective data; unable to evaluate:
 - Dosing strategies for failed PPTL neuraxial
 - Reactivation timing

Future Directions

- Prospective evaluation of potential explanatory variables:
 - Mode and effectiveness of labor neuraxial analgesia
 - Reactivation timing
 - Umbilical sparing rates
 - Preoperative and intraoperative management of *in situ* catheters





Images courtesy of Barbara Scavone