Effectiveness of post-cesarean delivery transversus abdominis plane blocks on postpartum pain and opioid use outcomes among mothers with opioid use disorder

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INTRODUCTION

The United States' opioid epidemic and poor maternal outcomes are not mutually exclusive.

Transversus abdominis plane (TAP) blocks after cesarean delivery offer a targeted solution to the postpartum analgesic dilemma and were adopted by our group in 2020 as a routine treatment offering for any patient with complex pain, in accordance with treatment guidelines.

METHODOLOGY

IRB approved retrospective cohort study

Patients with OUD treated with opioid agonist therapy (methadone or buprenorphine) who had a scheduled or unscheduled cesarean delivery performed at UPMC Magee-Womens Hospital from 2020-2022

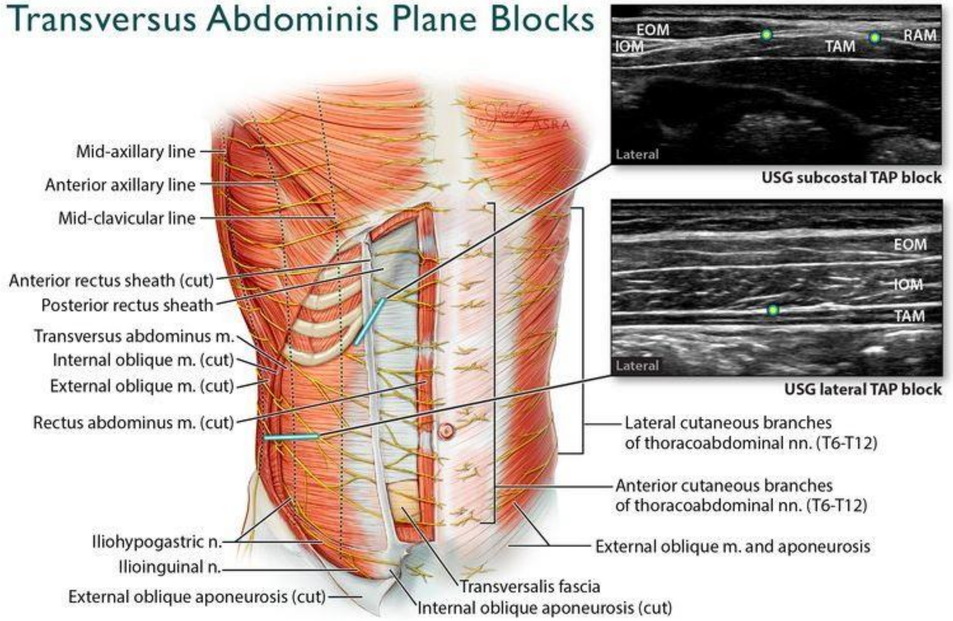
Patients with OUD having cesarean delivery and receiving TAP were compared to those not receiving TAP

Inclusion vs. Exclusion Criteria

Univariate linear regression assessed pain and opioid outcomes between TAP and no-TAP groups. A $P<0.05$ was considered statistically significant.

OBJECTIVE

To explore the effect of post-cesarean TAP blocks in patients with OUD on postpartum pain scores, postpartum opioid dose, and postpartum length of stay



https://www.asra.com/news-publications/asra-updates/blog-landing/legacy-b-blog-posts/2019/08/07/how-i-do-it-tap-block

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RESULTS

172 subjects included in final analysis

36 (21%) received TAP blocks

TAP and non-TAP groups did not have statistically significant differences in demographic characteristics

After controlling for co-variates, abdominal wall blocks were not associated with length of stay, maximum postop pain score, or total postpartum MME

TABLE 1. UNIVARIATE ANALYSIS INDENTIFYING PREDICTORS OF POSTPARTUM LENGTH OF STAY, POSTPARTUM MAXIMUM PAIN SCORE, AND POSTPARTUM TOTAL OPIOID DOSE

Variable (units)	R^2	Confidence Interval	Significance	
OUTCOME: LENGTH OF STAY				
Abdominal wall blocks	0.041	.13 to .82	0.01	**
Age	0.020	-.002 to .06	0.07	*
Gravidity	0.020	.003 to .12	0.04	**
Race	0.021	-.01 to .58	0.06	*
Admission BMI	0.020	-.001 to .04	0.06	*
Induction of labor	0.027	.04 to .84	0.03	**
Postpartum ibuprofen	0.034	.10 to .94	0.02	**
MME total	0.024	0 to .0001	0.04	**
OUTCOME: MAXIMUM POSTPARTUM PAIN SCORE				
Abdominal wall blocks	0.022	-.003 to .95	0.048	**
Age	0.018	-.004 to .08	0.08	*
Gravidity	0.029	.01 to .17	0.03	**
Parity	0.035	.03 to .28	0.02	**
Race	0.018	-.04 to .76	0.08	*
Smoker	0.054	.25 to 1.12	0.00	**
Converted to general	0.029	.06 to .86	0.03	**
Postpartum ketorolac	0.025	-1.69 to -.04	0.04	**
Postop PCA	0.047	.33 to 1.72	0.00	**
OUTCOME: POSTPARTUM TOTAL MME				
Abdominal wall blocks	0.042	36.81 to 2041.57	0.04	**
Length of stay days	0.024	18.70 to 870.78	0.04	**
Ketorolac intraoperatively	0.032	166.69 to 1799.98	0.02	**
Type of MOUD methadone	0.339	-2128.12 to -1385.76	<0.001	**
Total Daily MOUD dose	0.206	18.35 to 33.95	<0.001	**

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CONCLUSIONS

Abdominal wall blocks were not associated with postpartum length of stay, maximum postpartum pain score, or postpartum total opioid requirements.

Limitations:
Low sample size (n)
Study nature

TAP blocks continue to offer a potential solution for analgesic care for patients with OUD having a cesarean.

https://www.mother.ly/postpartum/fourth-trimester/postpartum-care-plan/

REFERENCES

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