Cocaine & ASC

PBLD Set 1

Jamey Eklund, MD

SAMBA 2024

No disclosures

Objectives

Review	Discuss	Consider
Review physiological effects of cocaine	Discuss the evidence for anesthetic risks to cocaine-using patients	Debate the consequences of rescheduling

Case

24 yo female presents for left knee arthroscopy with ACL reconstruction

Pre-op consultation

PMH?

Healthy
+ Seasonal allergies
+ Anxiety

Pre-op Consultation

PSH?

BM&T age 4
Left Elbow pinning age 7

No anesthetic complications

Pre-op Consultation

Meds?

No daily medications
Cetirizine prn allergy symptoms
Lorazepam prn anxiety

NKDA

Pre-op Consultation

Social hx?

Exercises daily
Employed as pharmaceutical rep
EtOH 5-7 drinks/week
+ weekly marijuana vaping

Physical exam

- BP 131/84, P 118, R 18, Temp 36.4℃
- Neuro: Anxious, fidgeting; no deficits
- HEENT: PERRLA, dried heme R nostril
- Airway: MP1, TMD>4FB, no loose/missing teeth
- CVS: tachycardiac, no murmur
- Pulm: CTA b/l
- Ext: +left knee brace

What other information?

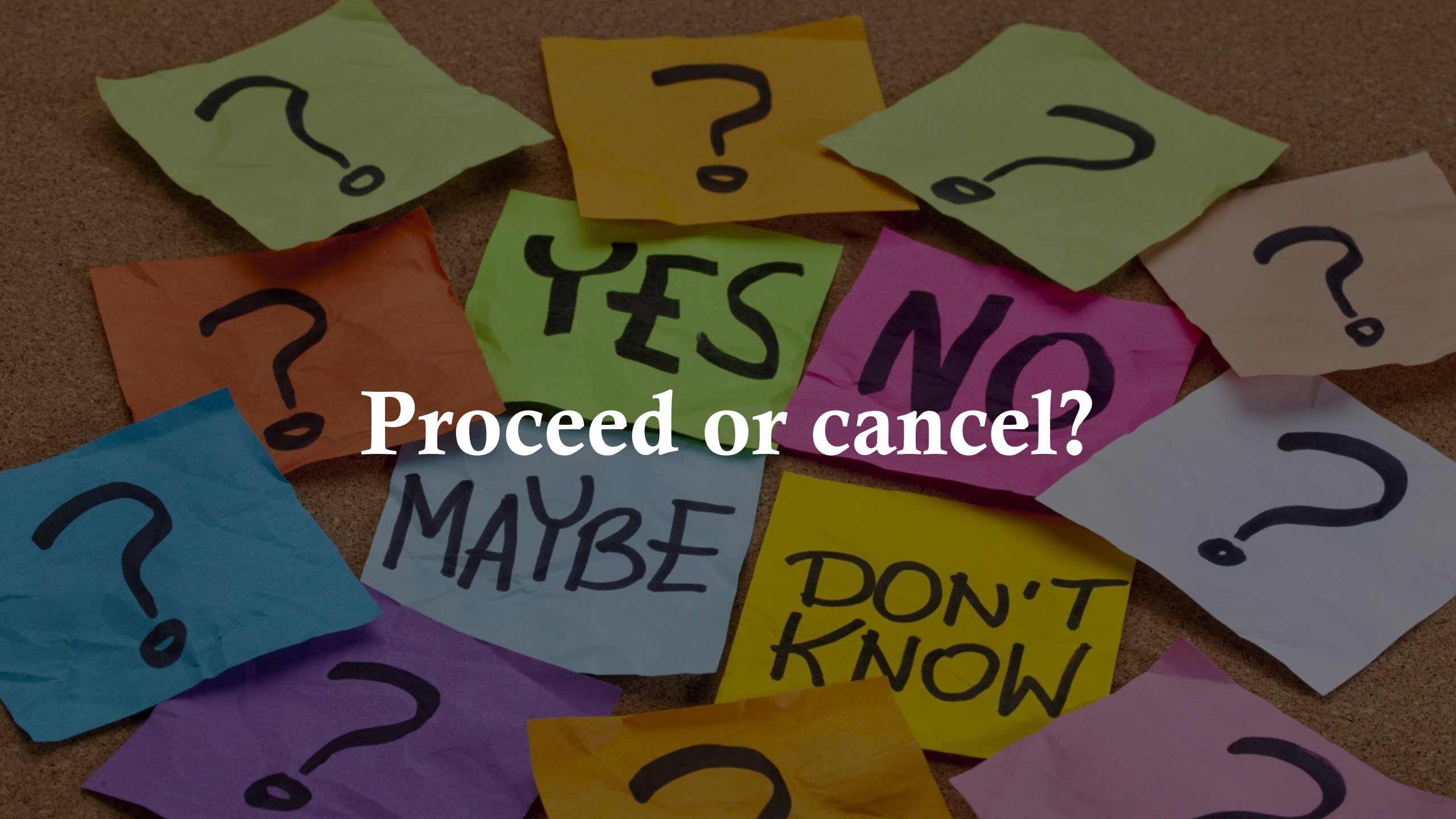
NPO → midnight

Urine hCG → negative

Inquire about anxiety → situational

Last EtOH, MJ, lorazepam, etc → 2300 yesterday

And… “just a couple of rails” at the club last night…



Proceed or cancel?

Cancel?

- Why?
- Concerns?

Physiological effects of cocaine

CNS stimulation

Euphoria & ↑ sexual drive

Agitation, anxiety, hallucinations, hyperactivity

Pupil dilation

Sweating

CVS stimulation

Increased HR & BP

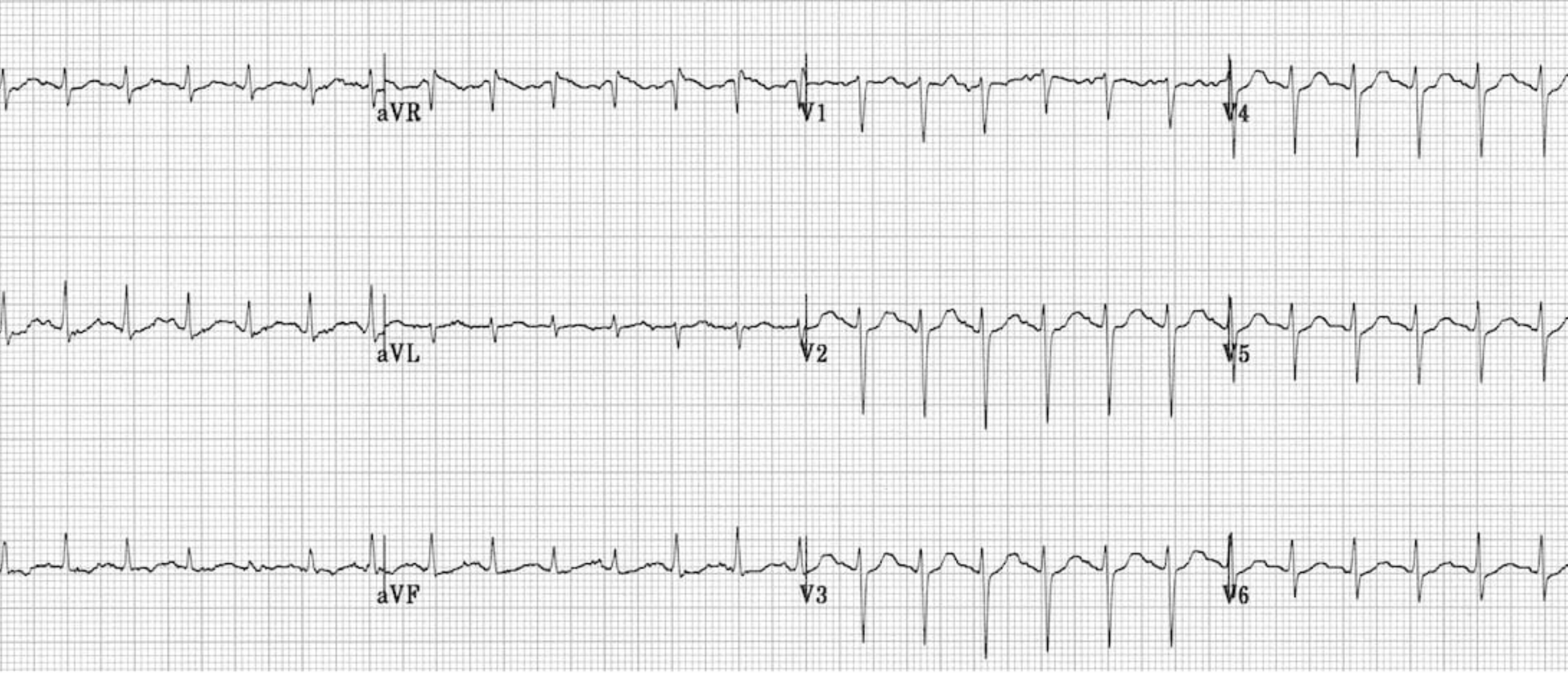
Vasospasm of coronary arteries

Foltin RW et al. Drug and alcohol dependence. 1995

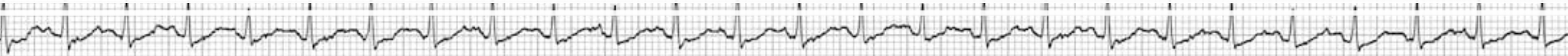
Jatlow PI. Clin Chem. 1987

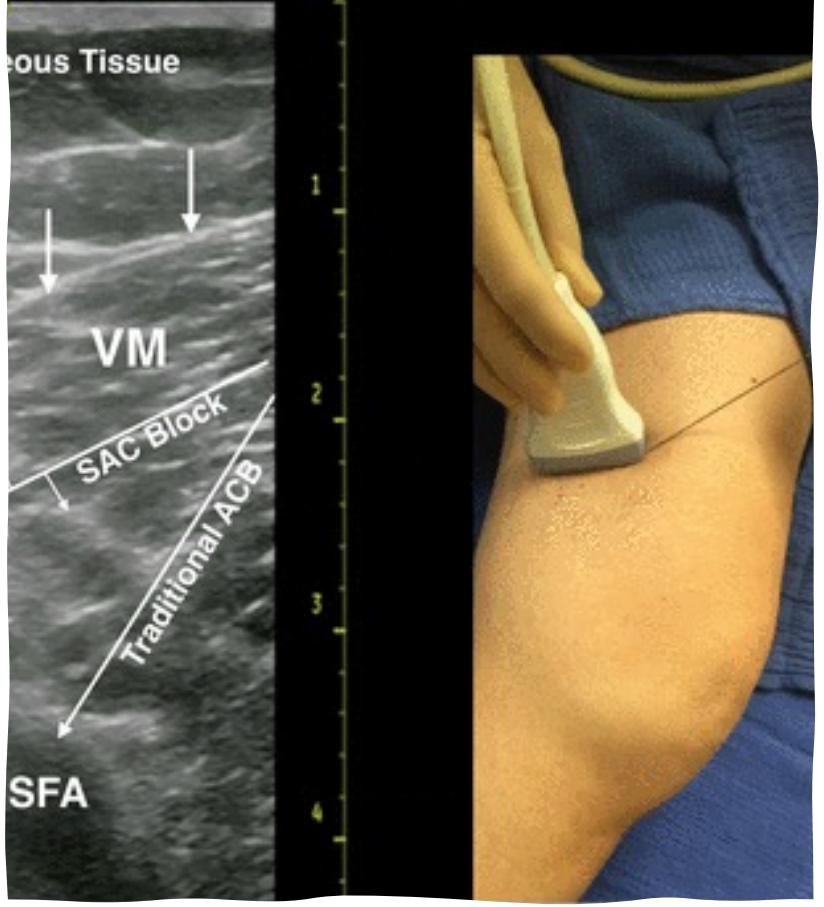
Resnick RB et al. Science. 1977

Rush CR et al. Drug and Alcohol Dependence. 1999



Proceed?





Proceed indeed:

- Midazolam 2mg IV
- Adductor canal block w/ ropivacaine 0.5%
- General anesthesia with LMA

Intra-op

- What agent to treat hypotension?
- What agent to treat hypertension?

Post-op

- No EKG changes
- Normal BP
- Comfortable, pain controlled
- Met PACU criteria for d/c home
- No complications

Discussion

- No single demographic
  - 1% of scheduled patients
- Urine tox screen?
- Evidence?

Hill GE BJA 2006
Moon TS J Clin Anesth 2019

British Journal of Anaesthesia **97** (**5**): 654–7 (2006)
doi:10.1093/bja/ael221 Advance Access publication August 16, 2006

BJA

General anaesthesia for the cocaine abusing patient. Is it safe?

G. E. Hill*, B. O. Ogunnaike and E. R. Johnson

Department of Anesthesiology and Pain Management, University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75390-9068, USA

**Corresponding author. E-mail: gary.hill@utsouthwestern.edu*

Hill et al—2006

Table 1 Patient characteristics and preinduction measurements. All values are mean (SD). *Denotes significant *P*-values

	Cocaine group (n=40)	Control group (n=40)	*P*-value
Number of males	25	23	0.82
Age (yr)	36.6 (32–43)	42.3 (37–48)	0.01*
Weight (kg)	82 (5)	86 (6)	0.02*
Preinduction systolic blood pressure (mm Hg)	126 (6)	127 (7)	0.49
Preinduction diastolic blood pressure (mm Hg)	77 (5)	80 (5)	0.08
Preinduction mean blood pressure (mm Hg)	93 (6)	95 (7)	0.17
Preinduction heart rate	85 (4.5)	84 (5)	0.35
QTc interval (ms)	425 (27)	419 (24)	0.29

Table 2 Intraoperative and postoperative data measurements. All results are mean (SD). No significant differences were noted in any variable measured

	Cocaine group (n=40)	Control group (n=40)	*P*-value
End-tidal sevoflurane concentration (%)	2.02 (0.5)	1.95 (0.3)	0.45
Intraoperative crystalloid volume infused (ml h^{-1})	722 (63)	698 (71)	0.11
Episodes of ST segment elevation/depression >1 mm	0	0	–
Post-anaesthesia recovery room stay (min)	58.5 (5)	61.3 (8)	0.06
Intraoperative body temperature (°C)	35.8 (0.6)	35.6 (0.6)	0.14
Total fentanyl dose (μg)	202 (20)	210 (19)	0.07
Duration anaesthesia (min)	114 (19)	118 (21)	0.37

Proceed if clinically non-toxic, QTc < 500ms

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Original Contribution

Recent cocaine use and the incidence of hemodynamic events during general anesthesia: A retrospective cohort study

Tiffany S. Moon M.D., Michael X. Gonzales M.S., Joshua J. Sun B.S., Agnes Kim M.S., Pamela E. Fox M.D., Abu T. Minhajuddin Ph.D., Taylor J. Pak B.S., Babatunde Ogunnaike M.D.

- No ↑ incidence of MAP changes
- No ↑ use of vasopressors
- ↑ use of anti-hypertensive
- No ↑ anesthetic requirement
- No difference in LOS or in-hospital complications

FEATURED ARTICLES: ORIGINAL CLINICAL RESEARCH REPORT

A Positive Cocaine Urine Toxicology Test and the Effect on Intraoperative Hemodynamics Under General Anesthesia

Moon, Tiffany S. MD; Pak, Taylor J. BS; Kim, Agnes MS; Gonzales, Michael X. MD; Volnov, Yuri MD; Wright, Evan MD; Vu, Kevin Q. BA; Lu, Rachael D. BS; Sharifi, Arghavan BS; Minhajuddin, Abu PhD; Chen, Joy L. MD; Fox, Pamela E. MD; Gasanova, Irina MD, PhD; Fox, Amanda A. MD, MPH; Stewart, Jesse MD; Ogunnaike, Babatunde MD

Author Information

Anesthesia & Analgesia 132(2):p 308-316, February 2021. | ***DOI:*** 10.1213/ANE.0000000000004808

CONCLUSIONS:

Asymptomatic cocaine-positive patients undergoing elective noncardiac surgery under general anesthesia have similar percentages of intraoperative hemodynamic events compared to cocaine-negative patients.

Who to reschedule?

- Acutely intoxicated
- Active symptoms
- QTc > 500ms
- Unable to give consent

Moon TS A&A 2021

Rescheduling

- Patients might not return
- Delay in care with worsening condition
- Lost revenue
- ASC costs: staffing, supplies, etc

Bartels K A&A 2021.

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