

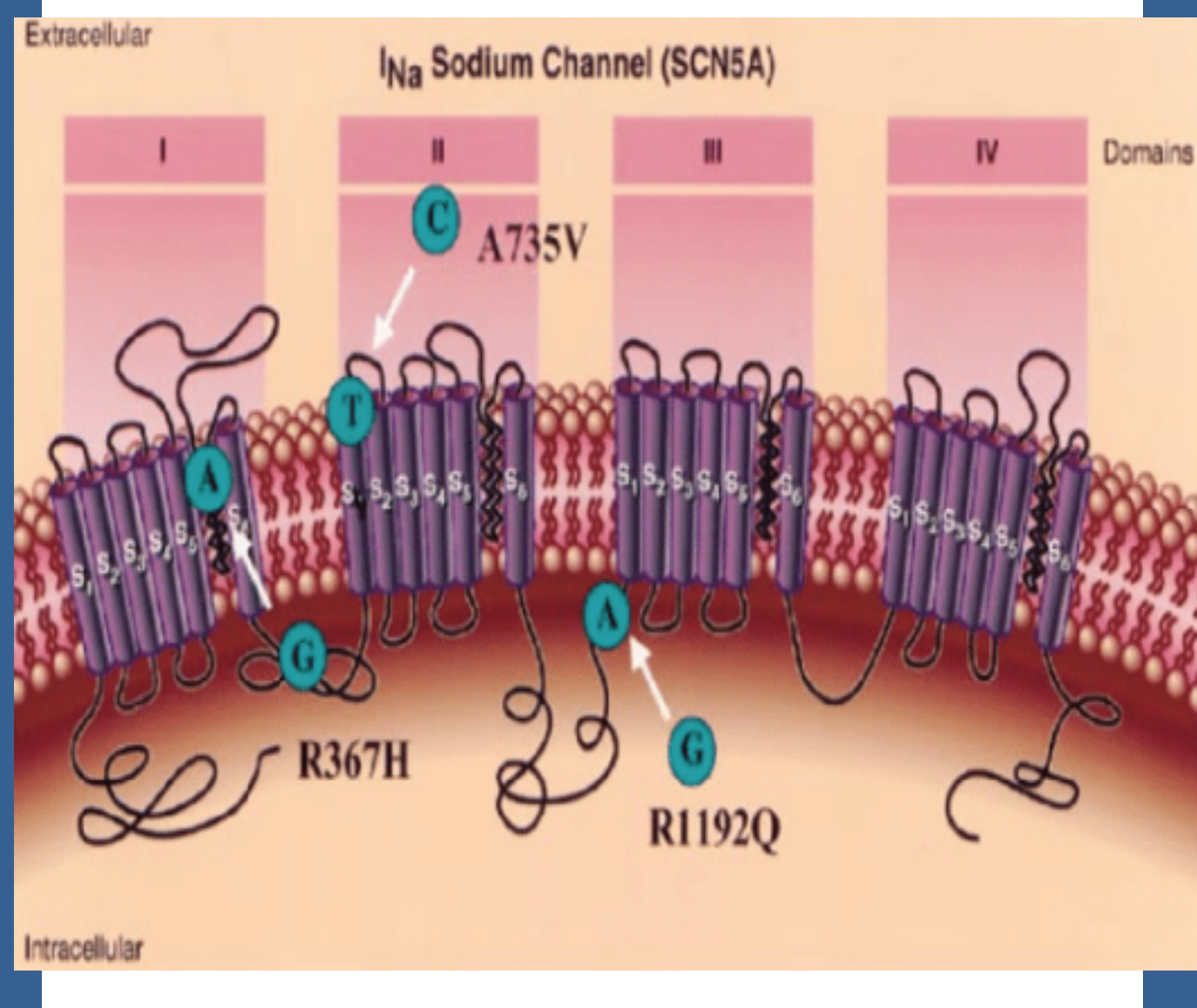
Anesthetic Management for a Parturient with Brugada Syndrome

Praeophayom Clarke, MD; Rachel Achu, MD; Nicole Spence, MD

Department of Anesthesiology, Boston University School of Medicine, Boston Medical Center, Boston, MA

BRUGADA SYNDROME

- Described in 1992
- Genetic defect that causes mutations in sodium channel subunits
- Rare, affects 5: 10,000 people
- Results in arrhythmias and cardiac arrest
- Conduction disturbances can be triggered by stress, pregnancy, and some medications including bupivacaine, procaine and propofol
- Consistent anesthetic management plan for parturients with Brugada syndrome has not been identified



CASE PRESENTATION

HPI: 28-year-old G2P1001 at 38w2d admitted in active labor

PMH: Hypothyroidism; post-partum idiopathic myopericarditis complicated by tamponade requiring pericardiocentesis in 2015

CURRENT MEDS: Levothyroxine 75mcg q day; prednisone 20mg q day

PAST MEDS: Azathioprine

EKG: "saddle type" ST elevation in leads V1 and V2 (**Figure 2**)

TTE: Trace pericardial effusion but otherwise unremarkable.

LABS: WBC 18.5, H/H 10.8/35.4, Plt 257, AST 14, ALT 14, Na 140, K 4.1, Cr 0.60

VITAL SIGNS: BP 116/65, HR 81, R 18, T 97.4, SaO2 98%

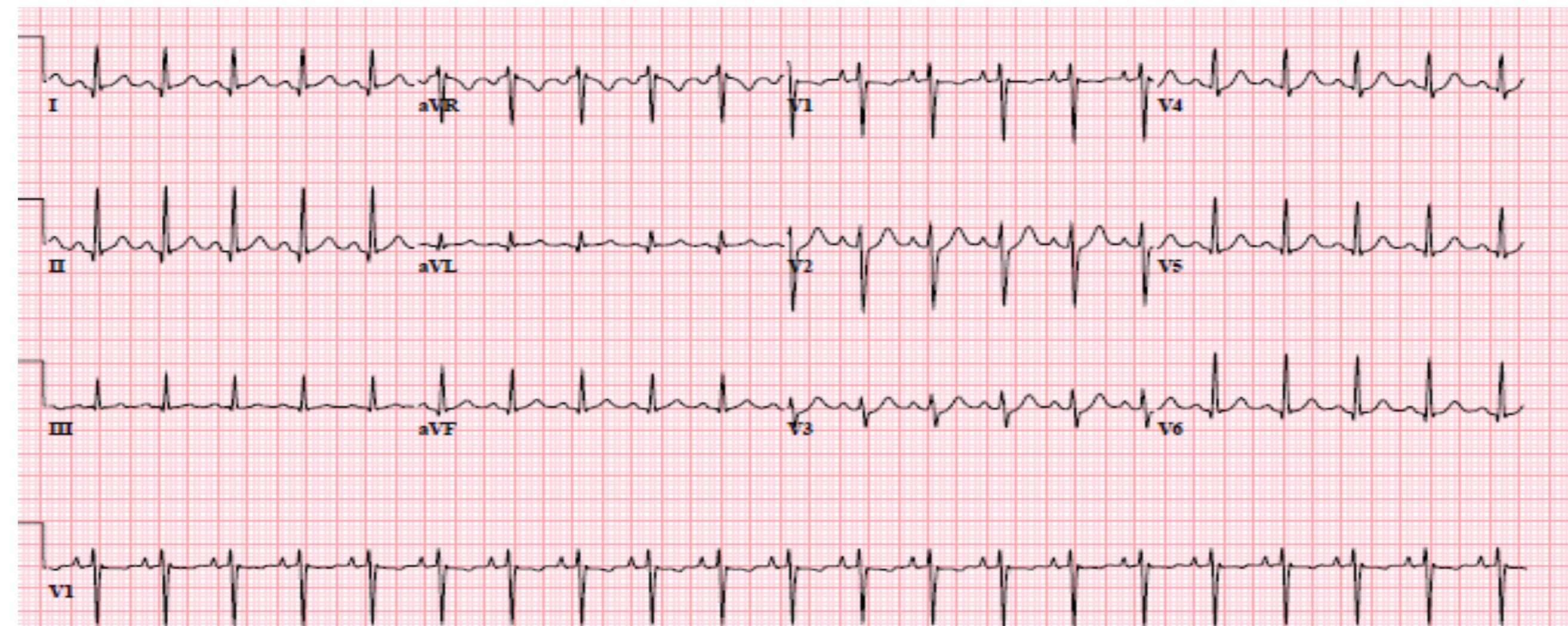


Figure 2. Patient's electrocardiography

ANESTHETIC MANAGEMENT

- Multidisciplinary team discussion prior to patient's presentation: obstetrics, anesthesiology, rheumatology, and cardiology
- Medication management: continue prednisone 20 mg throughout labor and postpartum
- During active labor, stress dose of hydrocortisone 50mg IV was given followed by hydrocortisone 24mg IV q8h for 48 hours postpartum for possible endogenous ACTH suppression since patient has been on 20mg of prednisone for more than 3 weeks
- Per patient request: uncomplicated epidural placement: standard mixture of 0.125% bupivacaine + 2mcg/mL fentanyl
- Patient delivered 171 minutes after epidural placement

CONCLUSION

- Brugada syndrome is a rare genetic disorder that can pose challenges to anesthetic management, especially for parturients in labor.
- Our patient tolerated epidural bupivacaine and fentanyl.
- The use of bupivacaine in a patient with a history of Brugada Syndrome could potentially promote arrhythmias that would necessitate an intracardiac device in the peripartum setting.
- This case highlights the importance of a multidisciplinary approach in the evaluation of complex patient with Brugada syndrome prior to presentation for delivery.

REFERENCES

- Minoura, Yoshino et al. "Drug-induced Brugada Syndrome." *Journal of Arrhythmia*. April 2013: 88-95
- Phillips, Nicole et al. "Brugada-Type Electrocardiographic Pattern Induced by Epidural Bupivacaine." *Anesthesia & Analgesia*. July 2003: 264-267