Anticoagulation and Blocks: Always a Dilemma

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ASRA PAIN MEDICINE
51st Annual Regional Anesthesiology and Acute Pain Medicine Meeting
April 16-18, 2026 | Phoenix, Arizona

Intro

- Acute coronary syndrome can often result in ventricular arrythmias.
- Treatments include antiarrhythmic medications, defibrillation, and ablation.
- Stellate ganglion blocks are indicated for refractory ventricular arrythmias via blockade of sympathetic input to the hearts electrical conducting system.
- Concerns arise with concurrent placement of blocks and anticoagulant use.

Methods

- This case report is devoid of patient identifiable information.
- Research was conducted in an established or commonly accepted educational setting.
- This research is exempt from IRB review requirements per IUSM's HRPP Exempt Research Policy.
- Consent was obtained from the patients next of kin.

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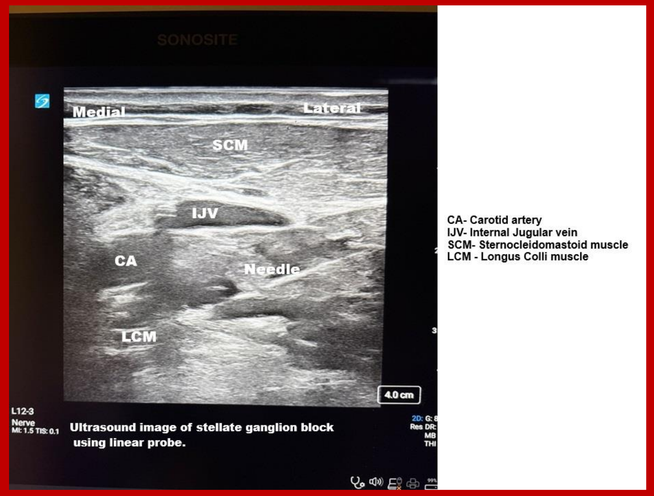
Concurrent placement of stellate ganglion block and bivalirudin infusion is **plausible** with **timely withholding interval** and understanding of **risk-benefit analysis**.



Ultrasound image of stellate ganglion block using linear probe.

CA- Carotid artery
IJV- Internal Jugular vein
SCM- Sternocleidomastoid muscle
LCM - Longus Colli muscle

Scan to **download the resources**

Case Report

- A 58-year-old male with PMH of diabetes mellitus and hypertension presented with acute decompensated heart failure complicated by ventricular arrest.
- ROSC was achieved. He was intubated, received an intra-aortic balloon, placed on ECMO, and given antiarrhythmic medication due to escalating ventricular arrythmias.
- Anticoagulation was switched from heparin to bivalirudin due to ECMO.
- The acute pain service was consulted for placement of an US guided stellate ganglion block (6 mL 0.25% bupivacaine).
- Anticoagulation was held one hour before and after the procedure to prevent hemorrhage and hematoma.
- After 36 hours, a second stellate ganglion block was required due to continued ventricular arrythmia.
- The patient had brief episodes of RVR, but no sustained ventricular tachycardia or fibrillation.
- His condition stabilized with continued antiarrhythmic therapy.
- He was successfully extubated four days later.

Discussion

- The American Society of Regional Anesthesia recommends against performing deep blocks in the presence of bivalirudin.
- The retrospective STAR study noted that 67% of patients receiving stellate ganglion blocks for electrical storm had anticoagulation on board.
- Bivalirudin is distinctive in that coagulation parameters normalized within one hour of discontinuing infusion, supporting safety of this withholding interval in this patient.
- This case highlights complex shared decision making and understanding risk-benefit analysis.