



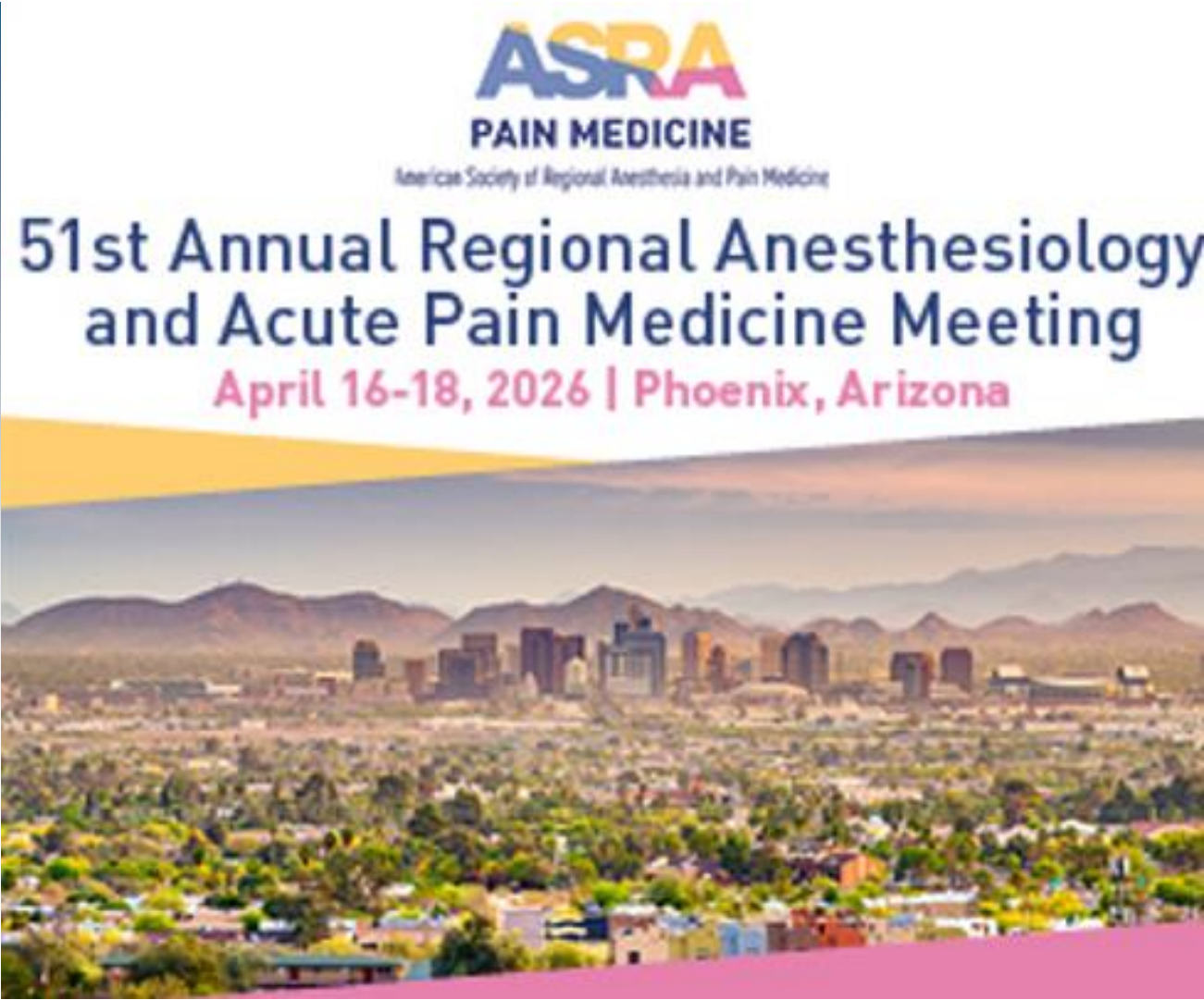
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Right-Sided Stellate Ganglion Catheter for Persistent Electrical Storm in a Patient at High Risk for LAST

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INTRODUCTION

- The stellate ganglion is implicated in electrical storms that cause ventricular arrhythmias [1].
- Left-sided continuous catheter stellate ganglion blocks (SGB) can provide 24 hours of electrical storm cessation [2].
- SGB in the presence of ongoing lidocaine infusion can result in local anesthetic systemic toxicity (LAST) [3].
- This case report describes a right-sided SGB that provided 48-hour relief from ventricular arrhythmias in a patient with ongoing lidocaine drip.

CASE PRESENTATION

- 72-year-old male with PMH of combined systolic and diastolic heart failure (NYHA IV), presented after PEA arrest. Hospital course was complicated by recurring ventricular arrhythmias requiring defibrillation.
- Lidocaine (1 mg / hour) and amiodarone drips were started to assist with rhythm control.
- On day 8 of admission, patient underwent multiple rounds of electrical storms and defibrillation despite anti-arrhythmic therapy.
- Regional anesthesia team was consulted for stellate ganglion blockade (SGB) due to refractory arrhythmia
- Family consented to SGB despite risk of LAST.
- Right-sided SGB was performed under ultrasound guidance with a total of 4 mL of 0.5% ropivacaine (due to a left-sided hemodialysis line). A catheter was also placed, running 0.2% ropivacaine at 5 mL / hour.
- No VF episodes for 48 hours after catheter placement.
- Overall, VF episodes dramatically decreased with catheter placement.

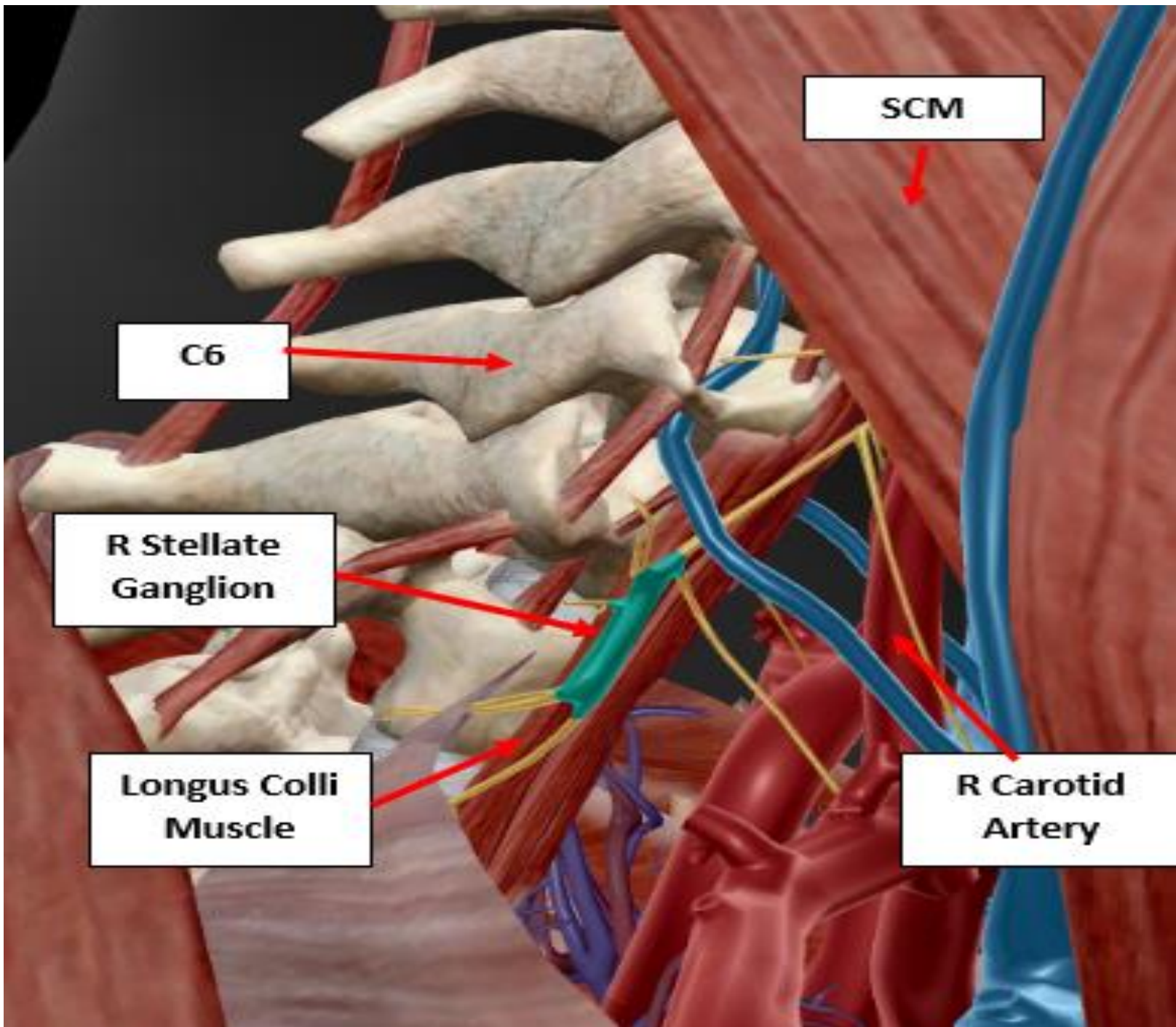


Figure 1: 3D rendition of location of stellate ganglion block (credit Human Anatomy Atlas). SCM: Sternocleidomastoid muscle

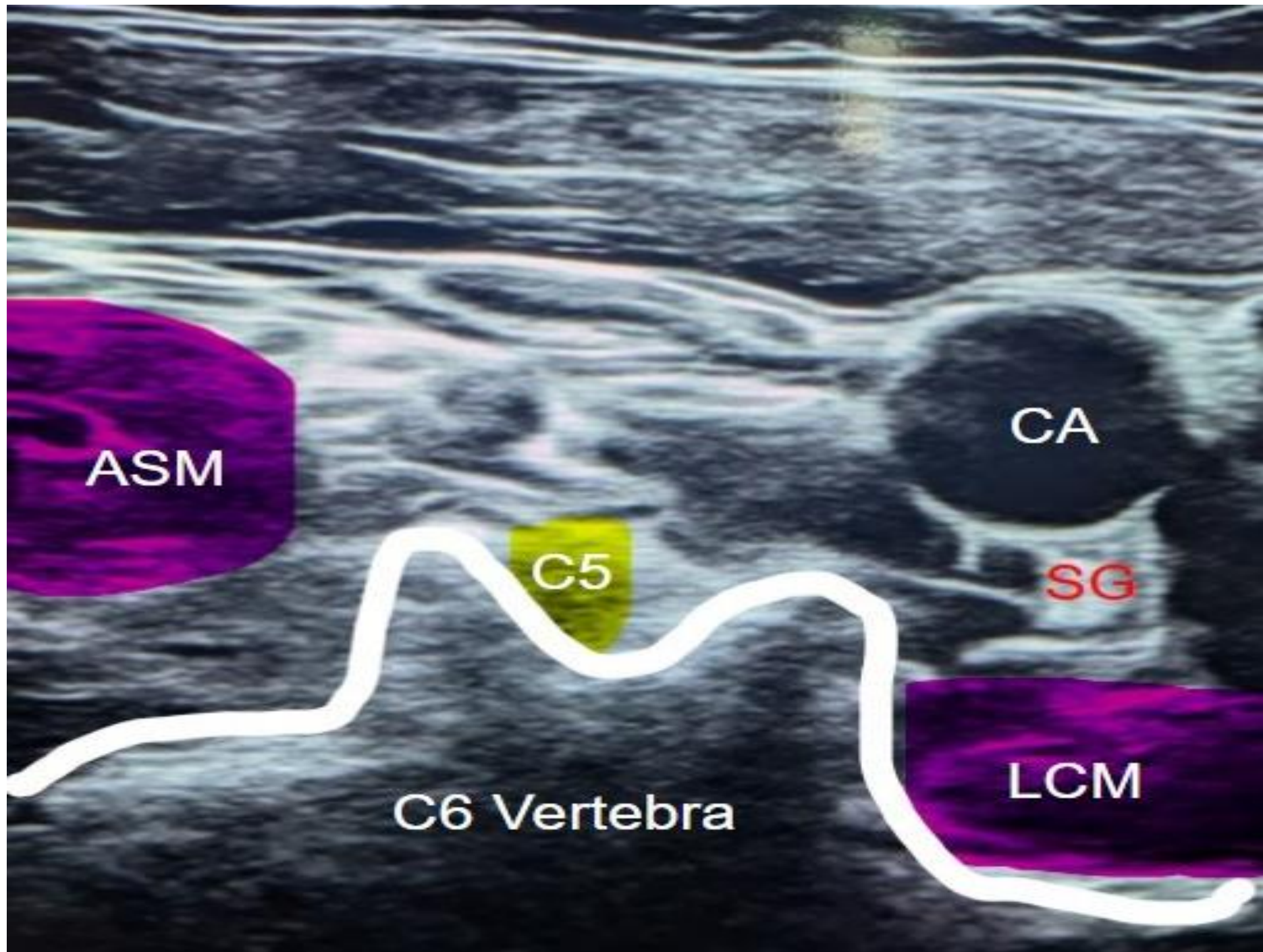
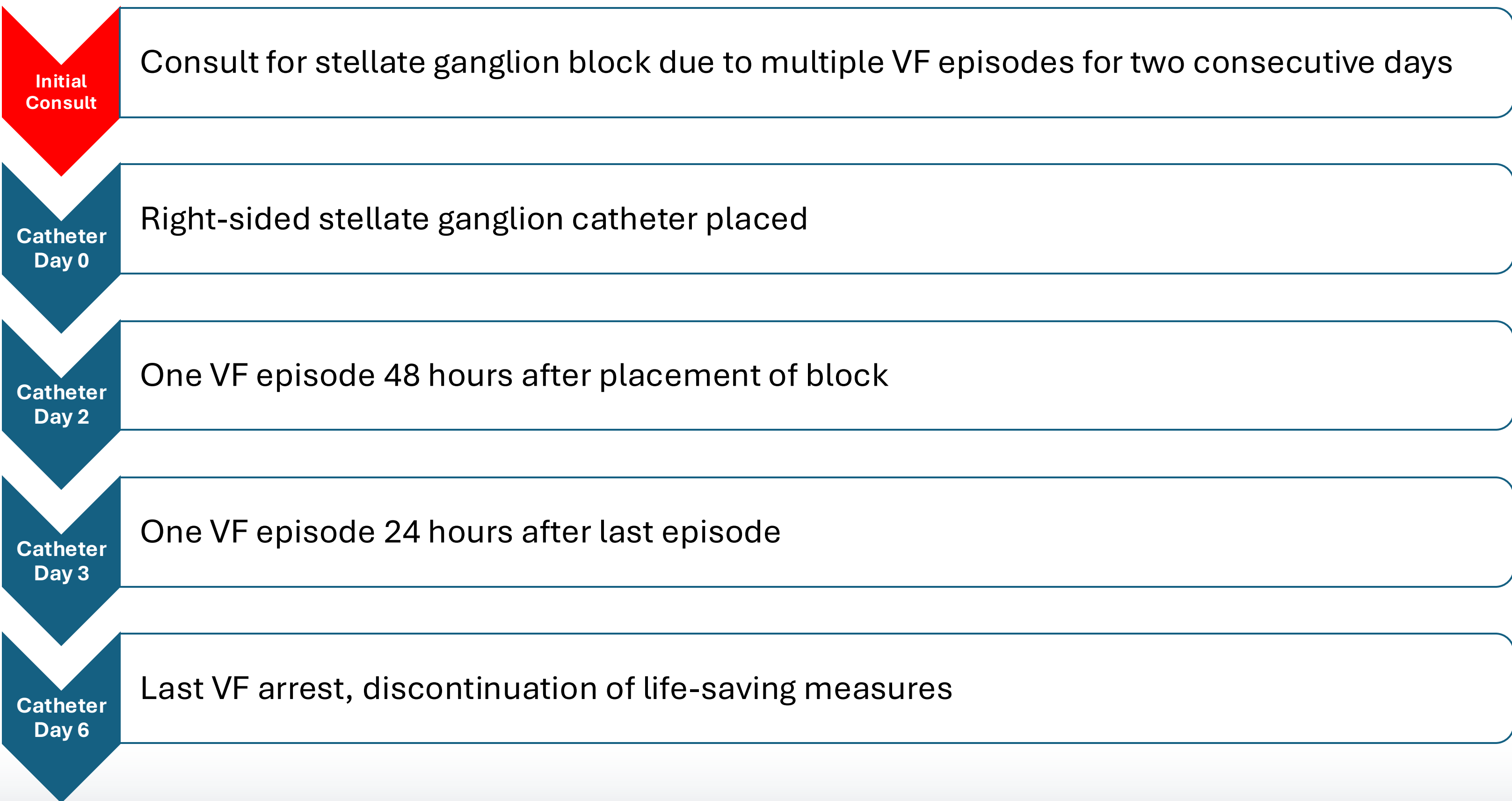


Figure 2: Ultrasound of stellate ganglion block (not from actual patient). ASM: Anterior scalene muscle, SG: stellate ganglion, LCM: Longus colli muscle

TIMELINE



DISCUSSION

- SGB are commonly performed on the left side, where sympathetic innervation to ventricles is predominant [4].
- Although a right-sided catheter was placed due to inaccessibility to the left side, it was still effective in arrhythmia cessation.
- LAST after SGB occurs in about 1.7 per 1000 procedures [3], however this patient was at increased risk due to the lidocaine drip. This highlights the importance of ultrasound guidance and careful technique.

CONCLUSIONS

- Right-sided stellate ganglion blocks may provide effective cessation of electrical storms in the event that a left-sided block is not possible.

REFERENCES

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