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Introduction

- Serratus anterior blocks (SABs) are well-known ultrasound-guided procedures to provide analgesia to the hemithorax.
- SABs are frequently used in the setting of rib fractures, thoracic surgery, or breast surgery.
- They have well-documented benefits, including:
 - Reduction of opioid use.
 - Decreased risk of pulmonary complications.
 - Promotion of faster recoveries [2-3].
- We present a novel and challenging case where SABs were used to facilitate extubation in a patient who experienced intractable pain due to multiple rib fractures from CPR after a cardiac arrest in fully anticoagulated patient on ECMO.

Materials and Methods

- This is a case report with information collected from patient chart review.
- The case report contains no identifiable patient information.
- As per NYU Langone policy, the case report is exempt from IRB review requirements.

Case Report

- A 64-year-old male presented after a cardiac arrest with bystander CPR and emergently underwent catheterization with PCI.
- Patient had rapid normalization of cardiac function but hospital course was complicated by ARDS and the patient was placed on ECMO.
- Extubation was challenging as the patient’s vital capacity was limited by pain secondary to multiple bilateral rib fractures from chest compressions done during CPR.
- Pain service was consulted for bilateral SABs to provide analgesia and facilitate extubation.
- Thoracic epidural or paravertebral blocks were not considered because the patient was thrombocytopenic, fully anticoagulated with Heparin for ECMO, and on Cangrelor for recent coronary stents.



Pain Management Saves the Day: Bilateral Serratus Anterior Blocks Facilitate Extubation in Anticoagulated Patient on ECMO

Case Report (continued)

- The procedure carried significant risks due to the recent coronary stent placement and the patient being on ECMO.
- Holding anticoagulation and antiplatelet therapy risked STEMI or ECMO catheter thrombosis, whereas proceeding with SABs without stopping these medications posed a high bleeding risk
- After careful risk-benefit assessment with the primary team, the decision was made to proceed with SABs without holding anticoagulation.
- The patient received effective analgesia and was safely extubated the same day.
- He was eventually weaned off ECMO and later discharged.

Discussion

- This case presents a unique indication for the use of SABs to facilitate extubation in a patient with several rib fractures.
- It posed an interesting challenge in determining whether to continue or hold anticoagulation in the setting of ECMO and cardiac stents.
- This case highlights the broad range of indications for nerve block techniques.
- It illustrates that pain procedures can be safely performed in high-risk patients through appropriate risk assessment, where it is determined that the benefits outweigh the risks.

References

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