Introduction: Spinal epidural hematoma (EH) is a rare but devastating complication associated with neuraxial techniques. A case of EH following atraumatic epidural insertion, in a patient without risk factor, a normal coagulation profile and appropriate anticoagulation medication respecting the current ASRA guidelines, is presented. (Patient consented.)

Case report: A 62 year-old lady (52.3kg, 155cm BMI 22) with lung cancer presented for a right upper lobe and middle lobe resection, lymph node dissection and thoracotomy. She is a smoker with history of hypertension, dyslipidemia and hypothyroidism and smoking. A T5-T6 epidural catheter was atraumatically inserted pre-induction. Her intraoperative course was uneventful. Postoperatively, an epidural infusion (bupivacaine 1mg/ml and fentanyl 3µg/ml) was started. Subcutaneous unfractionated heparin (UFH) 5,000 units every 12 h (BID) was started 5h after surgery together along with aspirin 80mg (patient's prior medication). Celecoxib 200mg BID was initiated on post-operative day (POD) one. Patient coagulation profile remained within normal limits.

On POD 3, at 21h00, the patient had back pain and the nurse bolused 4ml as per epidural orders and increased the epidural infusion rate to 10 ml/h. At 4h45AM of POD 4, the patient woke up with urinary retention, hemiparesis, bilateral lower extremity weakness more prominent on the right and T4-T10 bilateral sensory block. The epidural site was clean, non-tender with negative aspiration for blood. Epidural was stopped and a stat magnetic resonance imaging (MRI) was performed.

The MRI showed a T3-T6 hematoma (1.1cm x 0.6 cm, AP * transverse) with mass effect. At 9h30 of POD 4 (12 h and 30 min since symptoms started and 4 h and 45 min after the patient woke up with neurologic deficits), a T4 - T6 laminectomy and decompression was performed successfully. Intra-operatively, a prominent venous plexus posteriorly was observed at the site of epidural hematoma occupying the majority of the posterior epidural space. The patient completely recovered her neurological function and was discharged home on POD 7.
Discussion In this case, despite following ASRA and ESRA neuraxial guidelines for anticoagulation, a normal coagulation profile and atraumatic thoracic epidural insertion, the patient developed an EH. The risk of neuraxial technique with subcutaneous UFH alone is well documented (Table 1). There are no documented case reports of EH when aspirin or COX-2 inhibitor were administered alone with neuraxial technique. However, there are cases of spontaneous EH associated with aspirin use. Even with the guideline recommendations, the risk of EH when combining a COX-2 inhibitor to other anticoagulant and antiplatelet agents remains unknown. A cautionary approach should be used for evaluating the need on of concomitant use of these agents in patients receiving subcutaneous UFH and aspirin. Patient’s prominent venous plexus might have contributed to develop the EH. The patient had complete neurological recovery after prompt laminectomy (within for 4h from the onset of neurological deficits). This reaffirms previous studies which show the importance to rapidly diagnose and decompress an epidural hematoma to avoid neurologic sequelae [3].

References:


CONTINUOUS SPINAL ANESTHESIA IN A PATIENT WITH AORTIC STENOSIS

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Purpose: General anesthesia is usually advocated in patients with moderate to severe aortic stenosis (AS) for its hemodynamically stable properties\(^1\), however the patient’s individual characteristics may require a different anesthetic management. In this case we successfully used a titratable continuous spinal anesthetic technique to manage a patient with chronic obstructive pulmonary disease (COPD), a potentially difficult airway, and moderate AS for a hip fracture repair.

Clinical features: Informed consent was obtained to release this information for publication. An 81 year-old male presented in the ER with a left-sided hip fracture for urgent surgical repair. His past medical history included moderate aortic stenosis with peak/mean gradient 55/32 mmHg and aortic valve area of 1.04 cm\(^2\), COPD and signs of potential difficult airway. After reviewing risks and benefits, we elected to proceed with a titratable continuous spinal anesthesia. The patient remained clinically stable during the 90 minutes of surgery with a stable systolic blood pressure and required only one dose of vasopressor (5 mg of ephedrine) about 15 minutes after spinal was initiated. Patient had a fast and uncomplicated recovery post operatively.

Conclusion: Although the safety of neuraxial anesthesia in patients with moderate to severe AS continues under investigation, the use of a titratable continuous spinal anesthetic technique allowed us to successfully manage a patient undergoing hip fracture repair with multiple complicating factors. Further research regarding the anesthetic technique in patients with AS is warranted to enhance our ability to provide safe anesthetic management that is tailored to the individual patient.

References:
