

C-45 Targeted Reversal: My Patient on Anticoagulation Needs Emergent Surgery

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Objective

After completion of this session, the participant will be able to:

- Administer evidence-based reversal agents for patients on therapeutic anticoagulation presenting for emergent surgery.

Case Stem Question

A 78-year-old woman presents to the preoperative area for emergent exploratory laparotomy for perforated diverticulitis.

PMH: Atrial fibrillation, CAD, ESRD on HD

PSH: CABG 4 months ago, LUE A-V fistula creation

Medications: Aspirin, Clopidogrel, Apixaban, Carvedilol, Amlodipine

HPI: Patient reports abdominal discomfort since 2 days ago, localized to LLQ initially, then overnight with severe pain diffusely. Presented to the ED 6 hours ago. Abdominal exam was peritonitic, CT abdomen/pelvis showed abdominal free air, fat-stranding and inflammation in mid-sigmoid colon, suspicious for perforated diverticulitis. Last HD session was 3 days ago. Pt is anuric, originally due for dialysis today. Pt reports last dose of all medications were last night prior to travel to ED.

Vital signs: T 38.3 C, HR 97, BP 104/72, RR 22, SpO2 97% on room air

Height: 5' 6", Weight 68 kg

Physical Exam: Non-obese, A&O x3, anxious, heart RRR, lungs clear to auscultation, abdomen very tender to palpation with rebound and guarding, 1+ edema in bilateral LE

Labs: WBC 20 x10³/uL, Hgb 10.9 g/dL, Hct 32%, Plt 194 x10³/uL

Na 141 mmol/L, K 4.8 mmol/L, Cl 106 mmol/L, CO2 19 mmol/L, BUN 71 mg/dL, Cr 7.2 mg/dL

PT 16 seconds, INR 1.4, PTT 35 seconds

Guiding Questions for Discussion

1. Would you send additional coagulation studies preoperatively?
2. How would you approach this patient's anticoagulation on apixaban? Would you give reversal agents?
3. Andexanet alfa is not available, how else would you reverse apixaban? How does Andexanet alfa work? Are there risks?
4. How would you approach treatment of aspirin and clopidogrel preoperatively? Would you transfuse platelets?
5. Can you send the viscoelastic tests, thromboelastogram (TEG) or rotational thromboelastometry (ROTEM), to decide whether to transfuse platelets?
6. How would you approach this patient's high BUN?
7. What if this patient were taking therapeutic warfarin instead of apixaban? What is your treatment strategy?

8. What if this patient were taking dabigatran instead of apixaban? What reversal agents exist?

References

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