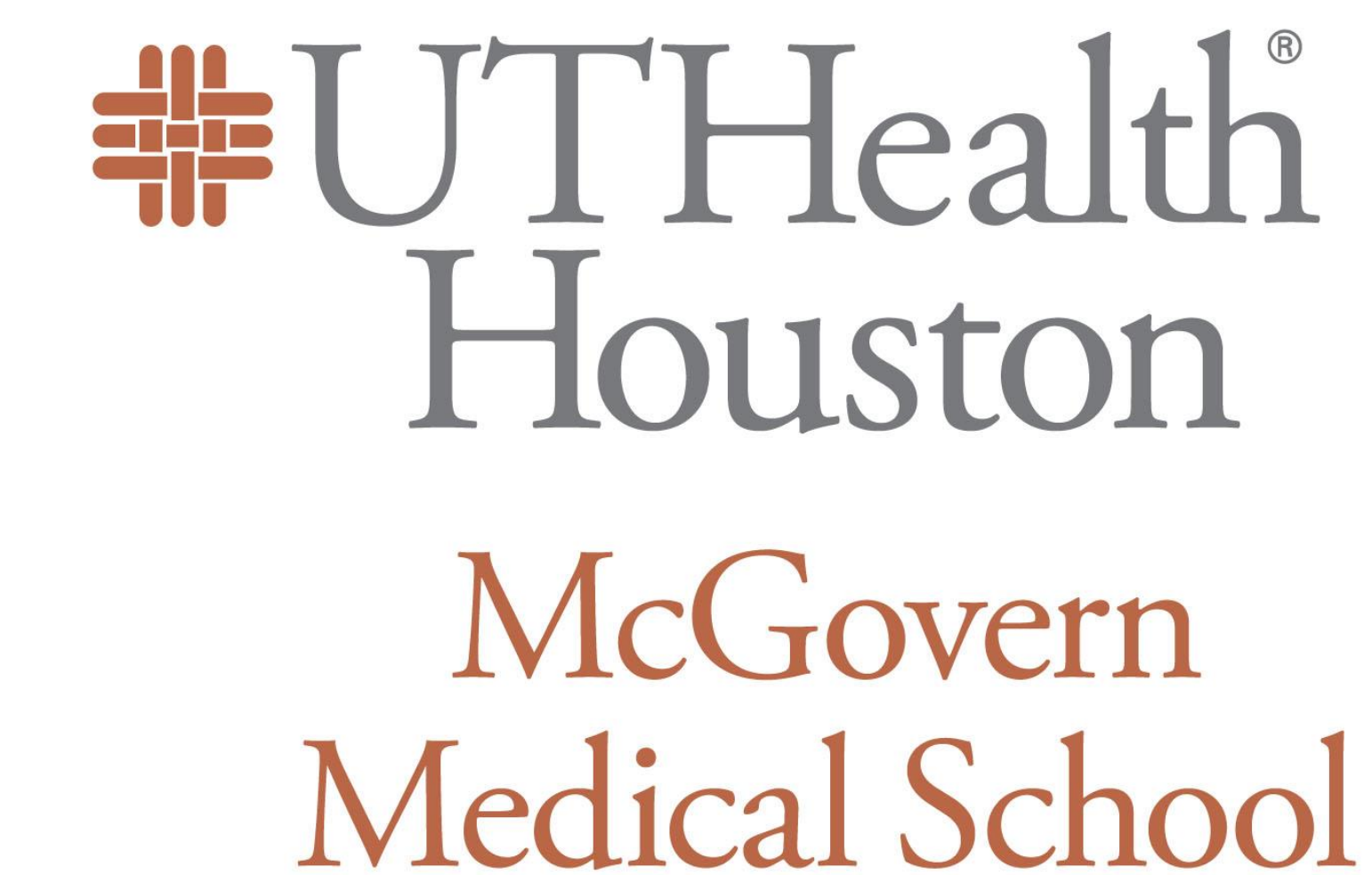




Complex Epidural Management in a Patient with Heparin-Induced Thrombocytopenia After Hernia Repair Surgery: A Case Report

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Introduction

- Heparin-induced thrombocytopenia (HIT) is a rare, serious reaction to heparin that results in thrombocytopenia with a mortality rate of 20% without early recognition.⁴
- HIT is a special concern in patients with epidurals due to increased risk of bleeding from consumptive coagulopathy and limitations for removing existing neuraxial catheters.
- We present a patient with an epidural placed for postoperative analgesia with a postoperative course complicated by HIT managed with a bivalirudin infusion.

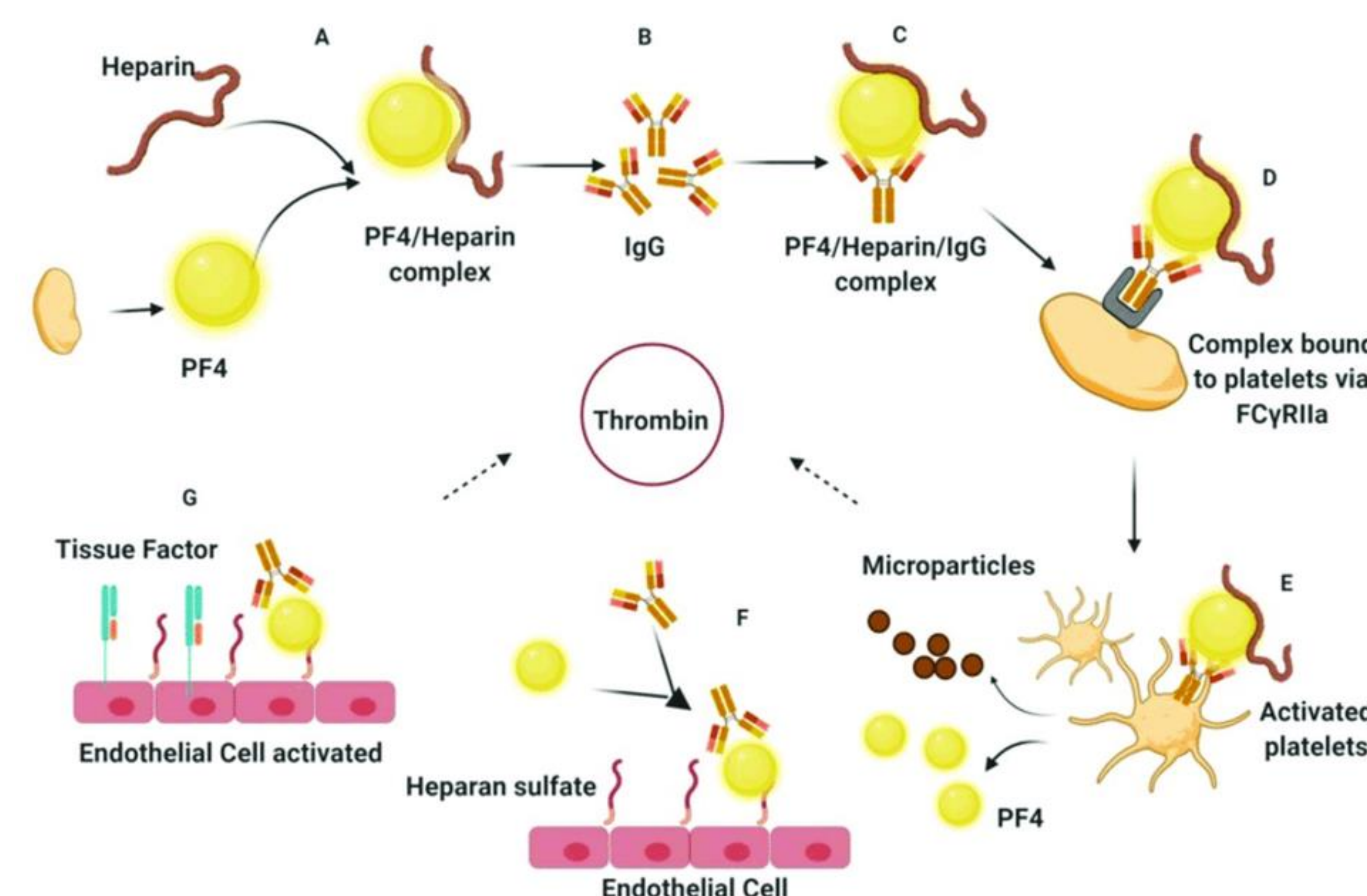


Figure 1. Pathophysiology of HIT.

Case Report

72-year-old female presented for a complex ventral hernia repair and abdominal wall reconstruction; she received a **T8 epidural preoperatively**

POD1: Hemodynamic instability requiring vasopressors created concern for bowel ischemia requiring exploratory laparotomy.

POD 2: 0.1% ropivacaine with 2 mcg/ml fentanyl epidural infusion was started.

POD3-6: Dose adjustments were made based on pain levels and hemodynamics.

POD 7: Platelet count dropped from 101 to a nadir of 36

- **Heparin-Induced Thrombocytopenia was suspected** and was confirmed with positive heparin antibody by ELISA and serotonin release assay
- Transitioned from heparin to a bivalirudin drip for anticoagulation

POD15: Per hematology recommendations, once the patient's platelet count rose above 100 for two consecutive days and the **bivalirudin drip was held for six hours, the epidural was removed** and anticoagulation was **restarted 4 hours afterwards**.

Joint ESAIC/ESRA Guidelines

- “Clinical situation: critical illness and parenteral urgent antiplatelet and/or anticoagulant therapy with a neuraxial or deep nerve catheter in situ (R21)
- In case of urgent indications for parenteral direct thrombin inhibitors (eg. bivalrudin)... when a neuraxial or deep nerve catheter is already in situ, interdisciplinary management is recommended, together with laboratory drug measurements and neurological monitoring after neuraxial procedures.
- The catheter could be removed after pausing short acting drugs for 4 to 5 half-lives.”

Discussion

- HIT complicates both anticoagulation and regional anesthetic options
- Current ASRA guidelines recommend avoiding placement or removal of catheters for patients receiving bivalirudin, but due to lack of evidence, **there is no consensus on the management of catheters in situ.**²
- European guidelines suggest that, for urgent administration of direct thrombin inhibitors, a catheter may be removed after pausing short-acting drugs for 4-5 half-lives.³
- As new anticoagulants become more prevalent, more research and consensus guidelines are needed to steer management and safely provide analgesia to these challenging patients.

Abstract & References

