

Perioperative Management of Anemia and Bleeding Disorders

Patient 1

A 71-year-old male with a history of hypertension and cataracts presents for preoperative evaluation. He was referred to you for preoperative evaluation for cataract surgery. His ophthalmologist requests that he get a complete blood count (CBC), prothrombin time (PT), and partial thromboplastin time (PTT). Aside from his visual disturbance, he is asymptomatic. He runs 2 miles 3 times a week on a treadmill with no problem. The only surgery he has ever had is a tooth extraction, during which time he did not bleed excessively. He does not bruise easily. His only medication is hydrochlorothiazide. Blood pressure is 120/82. Heart rate is 84. His conjunctivae are pink. There is no evidence of ecchymoses or petechiae. His exam is otherwise unremarkable.

What preoperative lab tests do you order? How will you communicate this decision with the ophthalmologist?

Patient 2

A 36-year-old female with a history of uterine fibroids and iron deficiency anemia (secondary to vaginal bleeding) is planned for total hysterectomy. She can climb 2 flights of stairs without dyspnea and she never has chest pain. She has no history of easy bruising or excessive bleeding (aside from heavy menses). She has no family history of bleeding disorders. Her only medication is her iron supplements, which she admits to forgetting to take on most days. Blood pressure is 116/76. Heart rate is 72. Her conjunctivae are slightly pale. Her labs reveal Hemoglobin of 9.2 gm/dl, mean corpuscular volume (MCV) of 78, and reticulocyte count of 2%. Iron is 29 ug/dl (40-170), total iron binding capacity is 437 ug/dl (200-400), and ferritin is 20 ng/ml (11-307).

Should she be transfused prior to surgery?

What would be your threshold for transfusion should her hemoglobin decline postoperatively?

Patient 3

A 56-year-old female with a history of coronary artery disease (CAD) and newly diagnosed colon cancer presents for preoperative assessment. She is planned for left hemicolectomy. She never has chest pain. She goes bowling twice a week with no dyspnea. She is on aspirin 325 mg every day, fluvastatin 20 mg every day, and metoprolol 25 mg twice daily. Blood pressure is 132/80. Heart rate is 64. Her exam is unremarkable. Her labs show hemoglobin of 10.9 gm/dl, MCV=78, and reticulocyte count of 2%. Iron is 30 ug/dl (40-170), total iron binding capacity is 444 ug/dl (200-400), and ferritin is 32 (11-307).

Which medications should she stop and when should she stop them?

What would be your threshold for transfusing her perioperatively?

Patient 4

A 49-year-old male has a history of chronic pancreatitis from remote etoh abuse. He is planned for video assisted thoracoscopy to evaluate a pulmonary nodule in 3 days. He has no chest pain or dyspnea with exertion. He has no history of easy bruising or excessive bleeding. His only medication is pancreatic enzymes, with which he is poorly compliant. Blood pressure is 118/78 and heart rate is 80. He is 5'10" tall and weighs 50 kg. Conjunctivae are pink. His exam is otherwise unremarkable.

Should he have any preoperative labs? Specifically, what should we order?

His PT is 21.6 seconds (12-15). International normalized ration (INR) is 1.9. PTT is normal.

Should you cancel the surgery? How might you correct this coagulopathy?

Patient 5

A 38-year-old female with history of idiopathic thrombocytopenic purpura is admitted with acute appendicitis. She is on prednisone 40 mg daily. Her white blood cell count is 16,000 per ul. The differential shows 80% neutrophils. Her hemoglobin is 12.4 gm/dl and her platelet count is 36,000 per ul. PT and PTT were checked and are normal.

Does she need a platelet transfusion prior to surgery?