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Antiplatelet/Coagulation Agent Management

Coumadin

Coumadin – Stop for 5-7 days if able, otherwise convert to heparin (IP) or lovenox (OP).

- Prior to changing or discontinuing a patients anticoagulation, the prescribing **physician must be contacted** and approve or the change.

ASA and Plavix

Two of the most commonly prescribed medications include **aspirin** and **clopidogrel** (Plavix; Bristol-Myers Squibb)

Both clopidogrel and aspirin result in irreversible platelet inhibition. In patients with normal bone marrow function and reserve, the platelet lifespan is approximately 10 days. Taking into account variabilities in drug clearance, **withholding antiplatelet agents for 5 – 7 days** will, therefore, result in approximately 30%–50% of platelets at the time of the procedure to have normal function.

Recommend stopping clopidogrel (Plavix) and aspirin for 5 – 7 days prior to procedures. This is at the discretion of the physician performing the procedure.

NSAIDS

The effect of **NSAIDs** on platelet aggregation, unlike aspirin, *is reversible* and will decay along with clearance of drug levels from the circulation.

NSAIDs do not cause significant bleeding problems except in patients with existing coagulopathies such as hemophilia, von Willebrand disease, or severe thrombocytopenia

Recommended days off Anticoagulation

When patients are taking medications that will change their coagulation times, these general rules apply:

- Agatroban – Stop for 2 hours

- Aggrenox (aspirin/extended-release dipyridamole) – Stop for 7 days
- Arixtra (fondaparinux) – Stop for 48 hours
- Asprin – Stop for 5-7 days
- Heparin drip – Stop drip on-call
- Integrilin(Eptifibatide) - hold for 6 hours prior to procedure.
- Lepirudin – Stop for 2 hours
- Lovenox – Hold PM prior to procedure and hold AM of procedure.
- Plavix (clopidogrel) – Stop for 5-7 days
- Pletal (Cilostazol) – Stop for 24 hours

Table 2
Category 1: Procedures with Low Risk of Bleeding, Easily Detected and Controllable

Procedures	Preprocedure Laboratory Testing	Management
Vascular Dialysis access interventions Venography Central line removal IVC filter placement PICC line placement	INR: Routinely recommended for patients receiving warfarin anticoagulation or with known or suspected liver disease Activated PTT: Routinely recommended for patients receiving intravenous unfractionated heparin. Platelet count: Not routinely recommended	INR >2.0: Threshold for treatment (ie, FFP, vitamin K) PTT: No consensus Hematocrit: No recommended threshold for transfusion Platelets: Transfusion recommended for counts <50,000/UL Plavix: Do not withhold Aspirin: Do not withhold Low-molecular-weight heparin (therapeutic dose): Withhold one dose before procedure DDAVP: Not indicated
Nonvascular Drainage catheter exchange (biliary, nephrostomy, abscess catheter) Thoracentesis Paracentesis Superficial aspiration and biopsy (excludes intrathoracic or intraabdominal sites): thyroid, superficial lymph node Superficial abscess drainage	Hematocrit: Not routinely recommended	

There was an 80% consensus for each of these recommendations unless otherwise stated. The management recommendations for each coagulation defect and drug assume that no other coagulation defect is present and that no other drug that might affect coagulation status has been administered.

Table 3
Category 2: Procedures with Moderate Risk of Bleeding

Procedures	Preprocedure Laboratory Testing	Management
Vascular Angiography, arterial intervention with access size up to 7 F Venous interventions Chemoembolization Uterine fibroid embolization Transjugular liver biopsy Tunneled central venous catheter Subcutaneous port device	INR: Recommended Activated PTT: Recommended in patients receiving intravenous unfractionated heparin Platelet count: Not routinely recommended Hematocrit: Not routinely recommended	INR: Correct above 1.5 (89% consensus) Activated PTT: No consensus (trend toward correcting for values >1.5 times control, 73%) Platelets: Transfusion recommended for counts <50,000/uL Hematocrit: No recommended threshold for transfusion Plavix: Withhold for 5 d before procedure Aspirin: Do not withhold Low-molecular-weight heparin (therapeutic dose): Withhold one dose before procedure DDAVP: not indicated
Nonvascular Intraabdominal, chest wall, or retroperitoneal abscess drainage or biopsy Lung biopsy Transabdominal liver biopsy (core needle) Percutaneous cholecystostomy Gastrostomy tube: initial placement Radiofrequency ablation: straightforward Spine procedures (vertebroplasty, kyphoplasty, lumbar puncture, epidural injection, facet block)		

There was an 80% consensus on each of these recommendations unless otherwise stated. The management recommendations for each coagulation defect and drug assume that no other coagulation defect is present and that no other drug that might affect coagulation status has been administered.

Procedures	Preprocedure Laboratory Testing	Management
Vascular Transjugular intrahepatic portosystemic shunt Nonvascular Renal biopsy Biliary interventions (new tract) Nephrostomy tube placement Radiofrequency ablation: complex	INR: Routinely recommended Activated PTT: Routinely recommended in patients receiving intravenous unfractionated heparin infusion. No consensus on patients not receiving heparin Platelet count: Routinely recommended Hematocrit: Routinely recommended	INR: Correct above 1.5 (95% consensus) Activated PTT: Stop or reverse heparin for values >1.5 times control) Platelets <50,000: Transfuse Hematocrit: No recommended threshold for transfusion Plavix: Withhold for 5 d before procedure Aspirin: Withhold for 5 d Fractionated heparin: withhold for 24 h or up to two doses DDAVP: Not indicated

There was an 80% consensus on each of these recommendations unless otherwise stated
 The management recommendations for each coagulation defect and drug assume that no other coagulation defect is present and that no other drug that might affect coagulation status has been administered.