ACG-CAG Management of Anticoagulants and Antiplatelets During Acute Gastrointestinal Bleeding and the Periendoscopic Period

By: Chuma Obineme

Anticoagulant Management in Acute Gastrointestinal Bleeding

Vitamin K Antagonists (VKA)

- Prothrombin Complex Concentrate (PCC) is preferred over FFP, but *no* recommendation for or against routine PCC use in GI bleed
  - Consider PCC in cases of life-threatening bleed, significantly elevated INR and in pts who are poor massive transfusion protocol candidates
- Recommendation *against* reversal of **VKA's** w/ *FFP*
  - May lead to increased thromboembolic events and increased risk of fluid overload
- Recommendation *against* routine reversal of INR w/ *Vitamin K*
  - Slow onset of action and increased risk of thrombosis
  - No evidence to suggest it leads to more rapid hemostasis or improvement in clinical outcomes

Direct Oral Anticoagulants (DOAC's)

- In patients on **Dabigatran** → recommend against the use of *Idarucizumab*
  - High cost, limited benefit. Consider in life threatening bleed and Dabigatran use within <24hrs
- In patients on **Apixaban** or **Rivaroxaban** → recommend against use of *Andexanet alfa*
  - Questionable evidence, high cost (~$50,000 per use).
  - Consider in life-threatening bleed and Apixaban/Rivaroxaban use within <24hrs
- *PCC* is not recommended in patients with GI bleed using **DOAC**
  - Limited evidence to suggest any clinical benefit
  - Can consider in life-threatening bleeding and DOAC use in <24hrs

Antiplatelet Management in Acute Gastrointestinal Bleeding

- Common anti-platelet agents include – **Aspirin** or **Acetylsalicylic acid (ASA), Thienopyridine** $P2Y_{12}$ receptor inhibitors (i.e **clopidogrel/prasugrel** – irreversible) and **Non-thienopyridine** $P2Y_{12}$ receptor inhibitor (i.e. **ticagrelor** – reversible)
- In non-thrombocytopenic patients receiving antiplatelet therapy w/ GI bleed → recommend against platelet (plt) transfusion
  - Plt transfusions may increase mortality, lead to more thrombotic events and carry risk of increased adverse transfuse related events
- Pts with GI bleed on ASA for **secondary cardiovascular prevention** should avoid holding ASA
- If ASA is held, restart ASA within 24hrs of confirmed endoscopic hemostasis

Abraham, Neena S. et al. American College of Gastroenterology-Canadian Association of Gastroenterology Clinical Practice Guideline: Management of Anticoagulants and Antiplatelets During Acute Gastrointestinal Bleeding and the Periendoscopic Period, The American Journal of Gastroenterology: April 2022 - Volume 117 - Issue 4 - p 542-558

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Thrombo-embolic Risk	Indications for Anticoagulation		
	Mechanical Heart Valve	**Atrial Fibrillation**	**Venous Thromboembolism**
High	-Mitral valve prosthesis -Any caged-ball or tilting disk AV prosthesis -Recent Stroke or TIA -TIA or stroke with VKA interruption	-CHA_2DS_2Vasc ≥7 or CHADS2: ≥5 -Stroke or TIA within 3 months -Rheumatic Valvular Heart Disease	-VTE within 3 months -Severe thrombophilia (protein C and/or S def, antithrombin def, antiphospholipid ab's and multiple abnormalities)
Moderate	-Bi-leaflet AV prosthesis & **≥1 of following: A.fib, prior stroke, TIA, HTN, T2DM, CHF, age >75**	-CHADS2: 2-4 (no prior stroke or TIA) -CHA_2DS_2Vasc: 5 or 6	-VTE within 3-12 months; Recurrent VTE -Non-severe thrombophilia (Factor V Leiden, prothrombin gene mutation) -Active Cancer (within 6 months of Tx)
Low	-Bi-leaflet AV prosthesis w/o above risk factors	-$CHADS_2$ Score: 0-1 or CHA_2DS_2Vasc: 1-4	-VTE more than 12 months ago without other risk factors

Elective endoscopic procedures should be deferred in those with high-risk of thromboembolic events

Pre-Procedural Management of Anticoagulant and Antiplatelet Therapy in *Elective* Endoscopic Procedures

VKA Induced Anticoagulation
-For low-risk procedures → suggest VKA be continued over temporary interruption
-In those with temporary VKA interruption –> suggest *against* bridging with anticoagulation

DOACs
-For endoscopic procedures → suggest interrupting DOACs for 1-2 days pre-procedurally
-Interruption of DOAC lower risk than VKA

Antiplatelet Agents
-On DAPT → suggest $P2Y_{12}$ interruption
-On $P2Y_{12}$ inhibitor monotherapy → No recommendation
-On ASA monotherapy → suggest against interruption

Endoscopic Procedures Stratified According to Bleeding Risk	
High Bleeding Risk *30-day risk of major bleed >2%*	**Low/Moderate Bleeding Risk** *30-day risk of major bleed <2%*
Polypectomy ≥1 cm	EGD ± Biopsy
PEG/PEG-J Placement	Colonoscopy ± Biopsy
ERCP w/ Sphincterotomy	Flex Sigmoidoscopy ± Biopsy
EMR/ESD	ERCP w/ Papillary Balloon Dilation or Stenting; w/o Sphincterotomy
EUS-FNA	EUS w/o FNA
Endoscopic Hemostasis (not APC)	Push Enteroscopy & Diagnostic Balloon Assisted Enteroscopy
RFA	Enteral Stent Deployment
POEM	APC
Tx of Varices (incl. band ligation)	Balloon Dilation of Luminal Stenoses
Therapeutic Balloon Enteroscopy	Polypectomy <1cm
Tumor Ablation	ERCP w/o Sphincterotomy
Cystogastrostomy	Endoscopic Marking (clipping, electrocoagulation and tattooing)
Ampullary Resection	Video Capsule Endoscopy
Pneumatic/Bougie Dilation	
Laser ablation or coagulation	

Post-Procedural Antiplatelet and Anticoagulant Management In *Elective* Endoscopic Procedures

No recommendation on timing of when to restart **Warfarin**, **DOAC** or **Antiplatelet Tx** (same day vs. 1-7 days) in those who underwent temporary interruption

- Timing determined by drug onset of action, ability to achieve hemostasis, risk of post-polypectomy bleed (PPB), risk of thrombosis, patient preference & multidisciplinary consultation.