

# GI GRAND ROUNDS

11/12/09

AYODELE OSOWO, MD

GI Fellow, UTH

# HPI

- 68-yr-old Caucasian female with 3 days of hematochezia
- Hypotensive in the ICU
- Blood mainly bright red occasionally dark red
- Most times blood was not mixed with stool
- A day after onset started feeling light headed and dizzy

# HPI

- Denies hematemesis or melena
- Denies abdominal pain or fever
- Denies weight loss, diarrhea or constipation
- No prior history of GI bleed
- Takes Ibuprofen and warfarin

# PMH

- Bilateral breast CA s/p mastectomy
- Mitral valve repair
- Atrial fibrillation
- Gastric outlet surgery ?
- Recent screening colonoscopy 10 days ago at St. Lukes Hospital. One polyp was removed

# History

- Allergies: Sulfa, hydrocodone
- Meds: Warfarin, losartan, spironolactone, amiodarone, ibuprofen, carvedilol and furosemide
- FH: Father → Parkinson's, mother → ovarian CA

# History

- SH: Etoh occasionally, no smoking or recreational drug use
- ROS: negative, otherwise as in HPC

# Examination

- Vital: B/P 86/61, p112, R 18, Sat 98%
- Gen: pale
- CVS: tachycardia
- Resp: clear
- Abd: soft , non-tender
- Ext: no edema
- CNS: oriented

# Labs

- INR: 4.58
- Hb; 10→ 8( 3hrs)
- WBC: 9.9
- Plt: 177
- Chemistry: Normal

# Summary

# Diagnosis

# Endoscopy



# Questions??

- When should prophylactic therapy be done?
- What modality should be used for prophylaxis ?
- When should warfarin be restarted after polypectomy ?

# Postpolypectomy bleeding ( PPB)

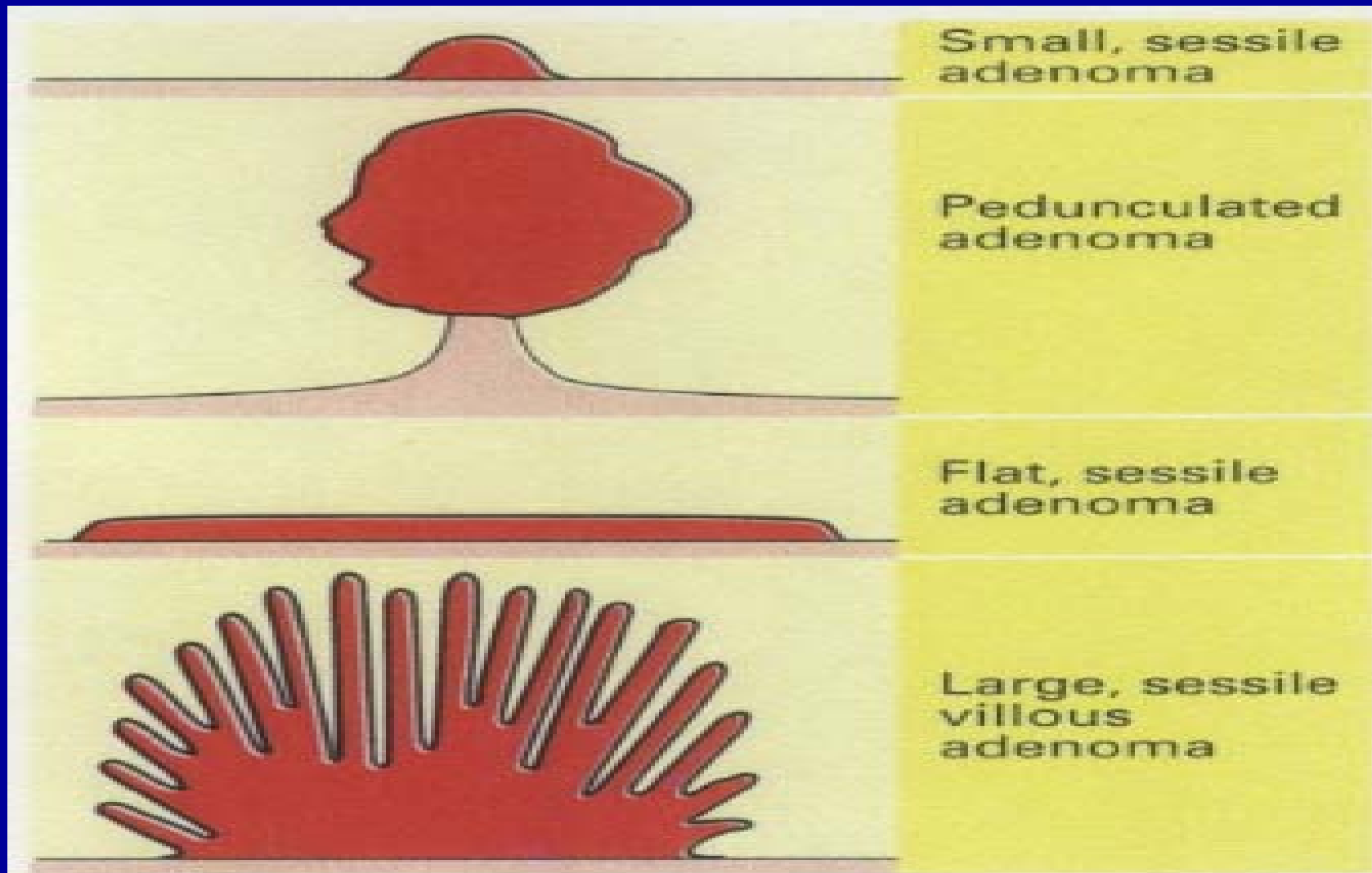
- Incidence : 0.3-6.1%
- Immediate : within one hour
- Delayed:
  - ✓ Early: >1-24 hours
  - ✓ Late: >1-29 days

*Sorbi et al. Gastrointest Endosc 2000 Jun;51(6):690-6.*

*Waye et al. J Clin Gastroenterol 1992 Dec;15(4):347-51.*

*Levin et al. Ann Intern Med. 2006 Dec 19;145(12):880-6.*

# Types of polyps



**Fig. 16.218** Gross appearances of adenomas.

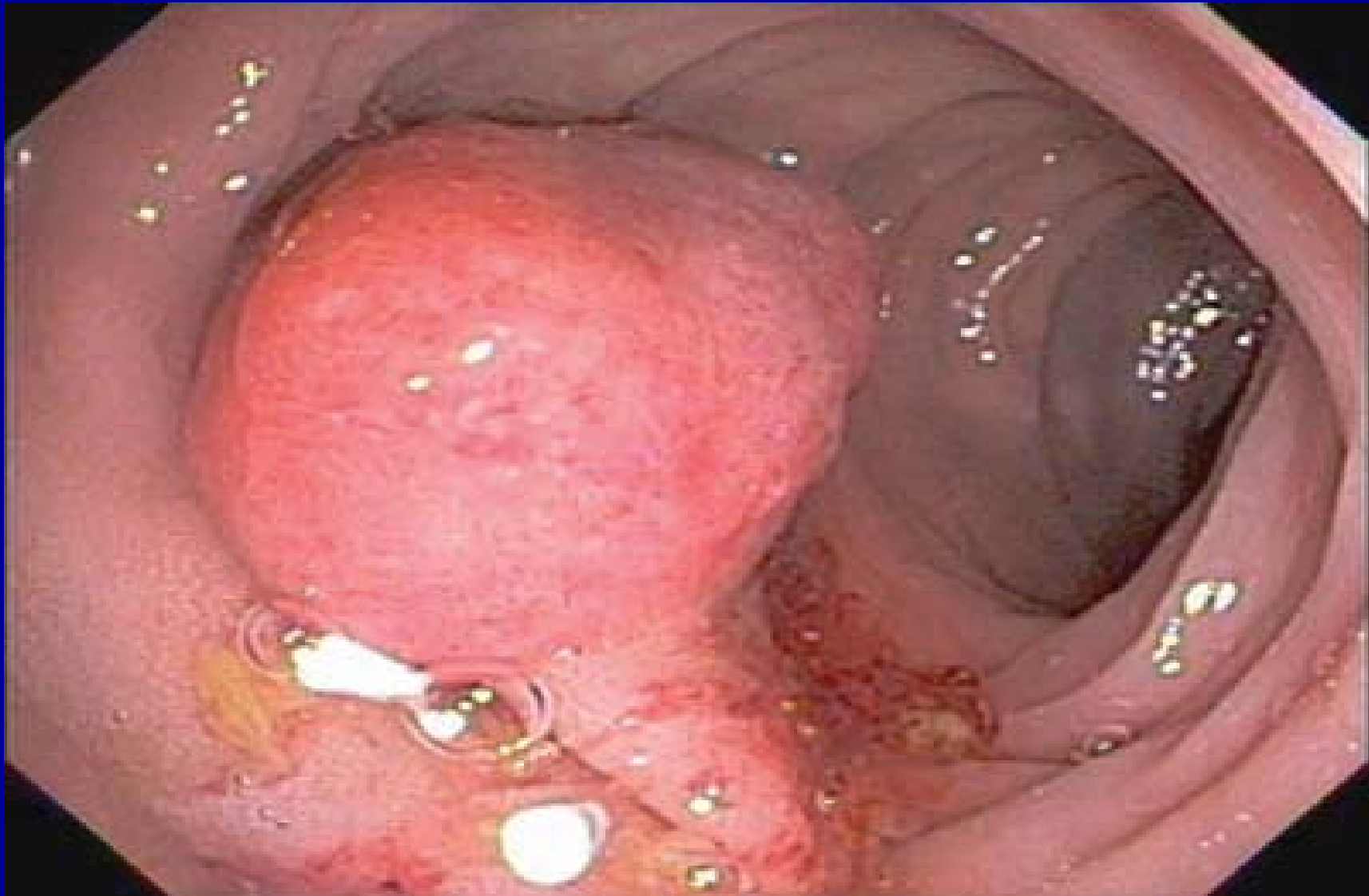
# Small sessile polyp



# Larger sessile polyp



# Pedunculated polyp



# Cross-section



# PPB

- Minor: No PRBC, Hct drop  $< 4\%$
- Significant: hemodynamically unstable,  $> 1$  PRBC, Hct drop  $> 4\%$
- Major: intervention required ( IR, Surg), complications

# pathogenesis

- Immediate:
  - ✓ Inadequate pedicle coagulation
  - ✓ Thermal injury
- Delayed:
  - ✓ Sloughing of eschar
  - ✓ Erosion of polypectomy ulcer into an intramural vessel

# Types of electrosurgical current

- Pure cut
- Coagulation
- blended

# Risk factors for Immediate PPB

- Type of current: blended
- Anticoagulation
- Antiplatelet agents (Not NSAIDS or ASA)
- Polyp size > 1cm
- Age > 65
- Errors made during endoscopy

*Kim et al. Am J Gastroenterol. 2006 Jun;101(6):1333-41.*

# Effect of current on timing of bleed

- Van Gossum et al
  - ✓ 1485 snare polypectomies
  - ✓ 758 blended current
  - ✓ 727 coagulation current
  - ✓ Incidence of bleed 0.9% (14)
  - ✓ 12 of 14 hemorrhages was in polyp >1cm
  - ✓ 8 blended –immediate, 6 coag- delayed

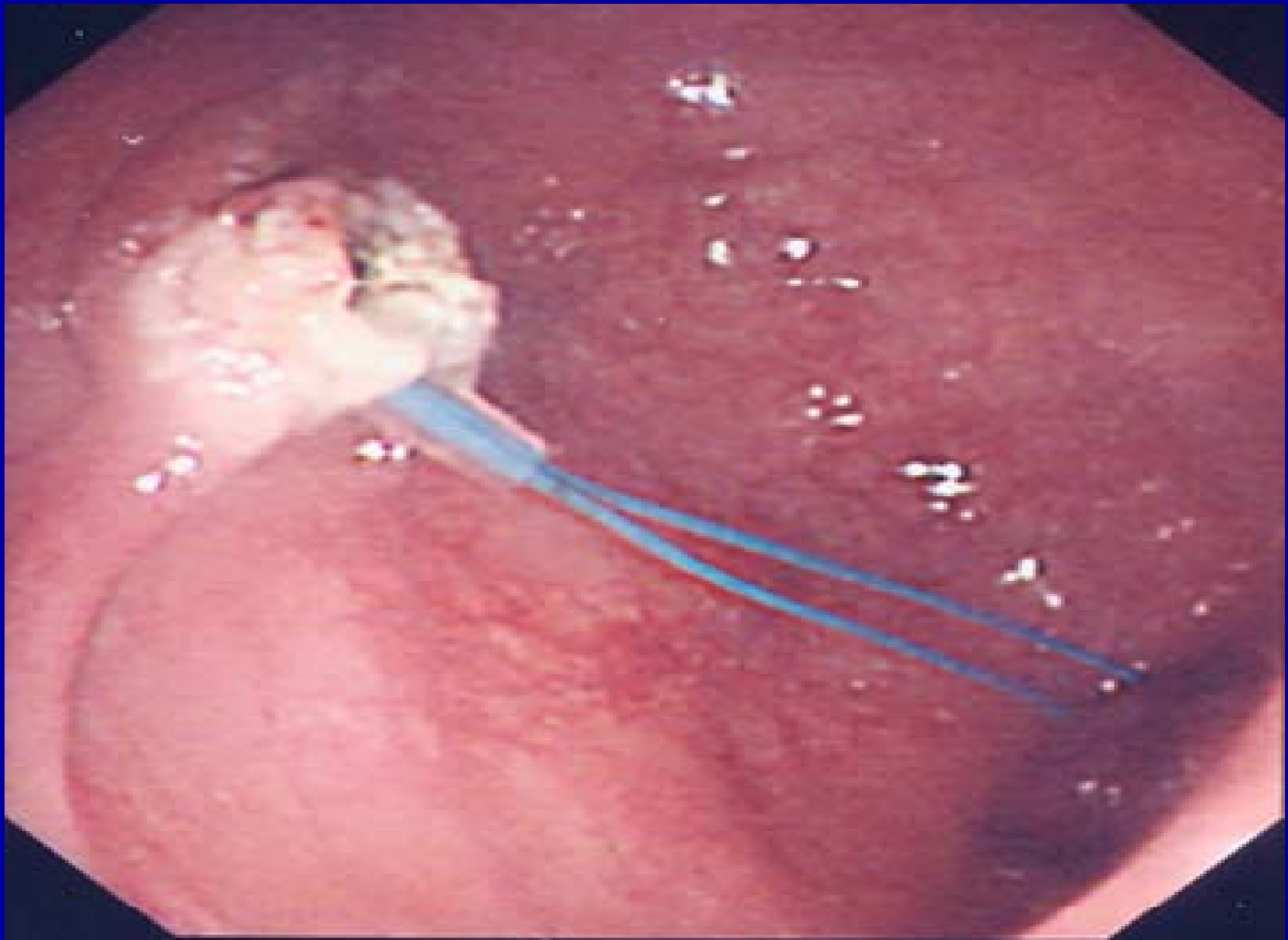
*Gastrointest Endosc 1992 Jul-Aug;38(4):472-5.*

# Risk factors for delayed PPB

- Type of current- coagulation
- Age > 65
- Hypertension
- Size of polyps > 1cm
- Large sessile polyp removed from the right colon
- Anticoagulation

# What modality should be used for prophylaxis?

- Epineprine
- Hemoclips
- Endoloop (detachable snare)



# Prophylaxis! When ?

- Shiorji et al
  - ✓ RCT- risk of PPB- delayed
  - ✓ 205-clip, 208- no clip
  - ✓ Mean polyp size 7.8mm(4)
  - ✓ 2 per grp had bleeding
- Sobrino-faya et al
  - ✓ Retrospective- PPB- immediate
  - ✓ 215 patients, 223 polypectomies
  - ✓ Hemoclips only for large polyps 15-40mm
  - ✓ Clips used for 34
  - ✓ 1 mild bleed

*Gastrointest Endosc 2003 May;57(6):691-4.*

• *Rev Esp Enferm Dig. 2002 Aug;94(8):457-62.*

# Modality for prophylaxis

- Di Giorgio et al
  - ✓ RCT (N=488)
  - ✓ Polyps: <1.9 and >2
  - ✓ Incidence of PPB 4.3%
  - ✓ Endoloop-(N=163), 1.8%
  - ✓ Epinephrine-(N=161), 3.1%
  - ✓ Snare-(N=164), 7.9%
  - ✓ Polyps: >2 ( n=207)
  - ✓ Incidence PPB 6.7%
  - ✓ Endoloop 2.7%
  - ✓ Epinephrine 2.9%
  - ✓ Snare 15.1%

*Endoscopy. 2004 oct; 36(10): 898-900*

# Modality for prophylaxis

- Friedland et al
  - ✓ Retrospective
  - ✓ 41 polypectomies (N=21)
  - ✓ On warfarin
  - ✓ Hemoclips for all
  - ✓ Mean INR 2.3 ( 1.4-4.9)
  - ✓ Polyp 5mm ( 3-10)
  - ✓ No episode of bleed
- *Gastrointest Endosc 2006;64:98-100.*)

# When should warfarin be restarted after polypectomy

- Lukens et al
- 105 patients on warfarin- prospective study
- 59% of polyps <1cm
- Warfarin was resumed in 66.6% of patients within 7 days
- 1 patient had PPB on day 11, warfarin was restarted within 7days.

*Am J Gastroenterol 2001; 96(9): A492*

# ASGE guidelines

**TABLE 1. Management of low-molecular-weight heparin and nonaspirin antiplatelet agents for endoscopic procedures**

## **Management of LMWH in patients undergoing endoscopic procedures**

Procedure risk	Recommendation
High	Consider discontinuation at least 8 h before procedure
Low	No change in therapy

Reinstitution of LMWH should be individualized.

## **Management of antiplatelet medication (clopidogrel or ticlopidine) in patients undergoing endoscopic procedures**

Procedure risk	Recommendation
High	Consider discontinuation 7-10 d before procedure
Low	No change in therapy

Patients on combination therapy (e.g., clopidogrel and aspirin) may be at an additional increased risk of bleeding.

For acute GI hemorrhage in the patient on clopidogrel or ticlopidine, the decision to transfuse platelets should be individualized, usually weighing the risk of an acute cardiovascular event against the risk of continued bleeding.

Reinstitution of clopidogrel or ticlopidine should be individualized.

## **Procedure risk**

High-risk procedures	Low-risk procedures
Polypectomy	Diagnostic
Biliary sphincterotomy	EGD ± biopsy
Pneumatic or bougie dilation	Flexible sphincterotomy ± biopsy
PEG placement	Colonoscopy ± biopsy
EUS-guided FNA	ERCP without endoscopic sphincterotomy
Laser ablation and coagulation	Biliary/pancreatic stent without endoscopic sphincterotomy
Treatment of varices	EUS without FNA
	Enteroscopy

# Guidelines and recommendations

- None for when to restart anticoagulation
- None for when to do prophylaxis for polypectomy bleed prophylaxis
- None for the modality to use

# Court of law

“There is no defined “standard of care” in this situation. But remember that in the eyes of the law, the “standard of care” is what a reasonable and prudent physician would do in the same situation. As always, be sure that you can justify your actions in the event of a negative outcome”

John Baillie, MD 2007

## Take to work message

- Polyp size  $>1\text{cm}$  on anticoagulation should be considered for PPB prophylaxis
- Warfarin resumption PP is reasonable around day 7, but individualize
- Patients 30 days postpolypectomy can still present with PPB

# My patient

- Had colonoscopy
- She was bleeding from the polypectomy site
- Two hemoclips were applied and hemostasis was achieved
- Discharged home to resume warfarin in 5 days

Comments and questions

- 

Thank you!