



Background

- Upper gastrointestinal bleeding (UGIB) is a common medical emergency leading to hospitalization.
- Management of antithrombotic agents including direct-acting anticoagulants (DOACs) in patients presenting with UGIB is an increasingly common clinical challenge.
- Limited data exists to guide clinicians in weighing the risk/benefit tradeoff of resuming DOAC therapy.

Objective

- We sought to describe post-procedural DOAC prescribing practices in a large, academic health system and to identify rates of rebleeding and thrombosis relative to when DOACs are restarted.
- Hypothesis: Patients whose DOAC is restarted sooner after endoscopy for UGIB have a higher frequency of rebleeding, but lower rate of thrombotic events, as compared to patients whose DOAC is restarted later or not restarted at all.

Methods

- We performed a retrospective cohort study of adults (>18 years) between 2014-2018 who were taking a DOAC and underwent esophagogastroduodenoscopy (EGD) for signs or symptoms of overt UGIB.
- Patients at 3 hospitals in a large, academic health system
- Collected the following information from the chart:
 - Demographic information
 - Current medications
 - Past medical history
 - Initial labs and vitals
 - Endoscopic findings and therapies
 - Timing of DOAC re-initiation (if restarted)
- Outcomes of interest were the following:
 - 30-day rebleeding
 - 30-day thrombotic events

Mean age (years)	73.8	Past Medical History	Proportion (N=141)
	Proportion (N=141)	Stroke	13%
Gender		Transient Ischemic Attack	4%
Male	51%	Deep Vein Thrombosis	14%
Female	49%	Pulmonary Embolism	16%
Race		Atrial Fibrillation	48%
White/Caucasian	70%	Gastrointestinal Bleed	8%
Black/African American	18%	Peptic Ulcer Disease	3%
Asian	1%	H. pylori	2%
Other	11%	Coronary Artery Disease	44%
Ethnicity		Heart Failure	32%
Non-Hispanic	91%	Hypertension	78%
Hispanic/Latino	9%	Type 2 Diabetes	40%
Type of DOAC		Chronic Kidney Disease	11%
Apixaban	55%	Alcohol Use Disorder	4%
Rivaroxaban	45%	Cirrhosis	1%
Other Prior Medications		Timing of DOAC Reinitiation Post-EGD	Proportion (N=80)
Aspirin	39%	Within 24 Hours	25%
Clopidogrel	11%	24 Hours - 7 Days	59%
Prasugrel	1%	>7 Days	16%
NSAID	6%	Rebleed	
Proton Pump Inhibitor	32%	Within 24 Hours	1%
Presentation		24 Hours - 7 Days	19%
Out of Hospital Bleed	90%	>7 Days	0%
Inpatient Bleed	10%		

Table 1. Baseline Characteristics of Patients on DOACs Presenting with Acute Upper Gastrointestinal Bleeding (N=141)

Results

- 141 total patients included in the study so far
- 136 (96%) had DOAC held prior to endoscopy
- 62 (44%) had identifiable source of bleed on EGD
 - Of these, most common etiology was peptic ulcer disease (18/62, 39%)
 - Mechanical clips placed in 12 patients
 - Thermal therapy performed in 10 patients
- Of 136 patients who had DOAC held prior to endoscopy:
 - 80 (59%) were restarted on the DOAC afterwards
 - 56 (41%) had the DOAC discontinued permanently
- In the 80 patients who had DOAC restarted, timing was as follows:
 - 20 (25%) were within 24 hours post-EGD
 - 47 (59%) were between 24 hours and 7 days
 - 13 (16%) were restarted after 7 days
- 30 (21%) total patients developed rebleeding within 30 days
 - All rebleeding events occurred in patients who had their DOAC restarted within 7 days post-EGD
- 2 total patients suffered strokes
 - Both occurred within 10 days of DOAC being held
- All cause 30-day mortality occurred in 7/141 (5%) of patients

Summary

- In this cohort of hospitalized patients with UGIB, we observed substantial variability in DOAC prescribing practices, particularly in the timing of DOAC initiation after EGD.
- Rebleeding occurred in patients who had DOAC restarted within 7 days.
- Thrombotic events occurred within a 10-day window in patients who had the DOAC held.

Limitations

- This cohort was developed using patient encounters at one academic health system that occurred between 2014-2018.
- With the rise in popularity of DOACs, many more patient encounters have occurred since.
- We are currently working on a cohort of >1100 new patient encounters with UGIB within the health system.
- Further work to expand this cohort with pre-defined subgroup analysis based on bleeding etiology is planned.
- Prospective cohort studies, RCTs, and collaborations with different health systems are possible.

Conclusions

- Decisions regarding the timing of DOAC resumption post-EGD should continue to be made on an individual basis.
- Patients and healthcare providers can use existing data to help inform risk/benefit decisions.
- In the future, the goal will be to provide better guidance for the timing of resumption post-EGD in UGIB.
- I would like to acknowledge Yale School of Medicine and Dr. Loren Laine for this project.