

INR stabilization after withholding warfarin for colonoscopy

Authors: Sally Sikes, PharmD • Kelley Baxter, PharmD • Matt Bibb, PharmD, BCGP • *The authors have no conflict of interest.*

Affiliations: Ascension Saint Thomas Hospital West • Anticoagulation Monitoring Clinic

Introduction

- The peri-procedural management of anticoagulation is a common clinical occurrence practitioners face on a daily basis, affecting approximately 250,000 patients annually in North America alone¹
- The decision to interrupt warfarin therapy surrounding a procedure depends on the patient's thromboembolic and bleeding risk, as well as the risks associated with the type of procedure performed²
- In recent years, a variation in the time required for Anticoagulation Monitoring Clinic (AMC) patients to return to stable INR post-colonoscopy has been identified, as well as a change in their warfarin total weekly dosage (TWD)
- INR stabilization is defined as two consecutive therapeutic INRs on the same warfarin TWD
- Drug-drug interactions include amiodarone, ciprofloxacin, fluconazole, metronidazole, sulfamethoxazole/trimethoprim, and other clinically significant peri-procedural medication interactions

Objective

Determine the time to INR stabilization after withholding warfarin for colonoscopy

Methods

- Single-center, retrospective, cohort chart review of patients from September 1, 2016 to September 30, 2018 utilizing CoagClinic and Cerner computer softwares
- Inclusion (n=40)**
 - ≥ 18 years of age
 - Patients monitored by AMC
 - Patients undergoing colonoscopy between September 1, 2016 and September 30, 2018
- Exclusion (n=623)**
 - Patients not monitored by AMC periprocedurally
 - Patients with additional procedures performed within 4 weeks of colonoscopy
 - Patients who were lost to follow-up post-colonoscopy, prior to INR stabilization

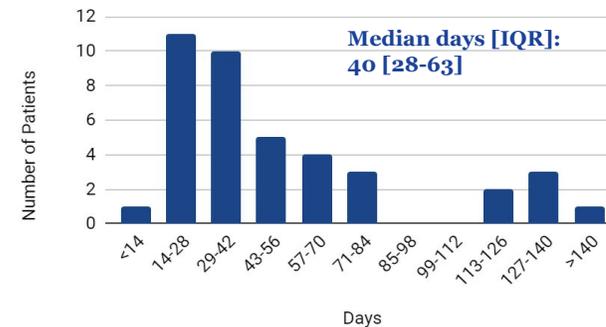
Baseline Characteristics

n = 40 *All data stated as n (%) unless stated otherwise*

Age, years (median, [IQR])	69 [60-74]
Male	20 (50)
Warfarin Indication	
Venous thromboembolism	17 (43)
Atrial fibrillation	18 (45)
Aortic valve replacement	4 (10)
Mitral valve replacement	1 (2.5)
Hypercoagulable state	11 (28)
Cerebrovascular accident	2 (5)
Peripheral vascular disease	1 (2.5)
Intracardiac thrombus	1 (2.5)
Goal INR Range	
2-3	36 (90)
2.5-3	2 (5)
2.5-3.5	1 (2.5)
3-4	1 (2.5)
Pre-Procedure INR Monitoring Frequency	
1-2 weeks	15 (38)
3-4 weeks	14 (35)
5-6 weeks	11 (28)
Periprocedural Parenteral Anticoagulant Therapy	
Yes	15 (38)
No	25 (63)
Maintenance Antiplatelet Therapy	8 (20)
Drug-drug Interactions	7 (18)

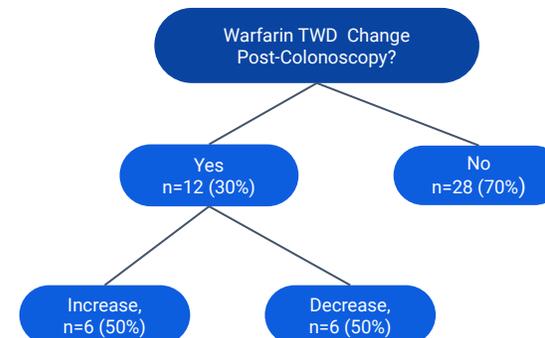
Results

Time to INR Stabilization



Subgroup Analysis - Median Time to INR Stabilization, days [IQR]

Parenteral Therapy		
Yes	28 [23-38]	<i>p</i> =0.04
No	50 [33-54]	
Gender		
Male	39 [25-89]	<i>p</i> =0.94
Female	40 [33-59]	
Drug-drug Interaction		
Yes	64 [57-75]	<i>p</i> =0.03
No	35 [25-55]	
Antiplatelet Therapy		
Yes	44 [25-78]	<i>p</i> =0.87
No	39 [28-63]	



Discussion

- There was no difference in the median total weekly warfarin dosage amongst patients pre-colonoscopy vs. post-colonoscopy
- Patients with documented drug-drug interactions took longer to reach stable INR status than those without drug-drug interactions
- Patients who were not on parenteral anticoagulation and those who were considered more stable (INR checking frequency of 5-6 weeks) took longer to reach stabilization post-colonoscopy likely due to being scheduled for extended INR checking frequency intervals faster than the other groups

Conclusion

The median time to INR stabilization after withholding warfarin for colonoscopy was 40 days

References

- Douketis, J. D., Spyropoulos, A. C., Spencer, F. A., et al. (2012). Perioperative Management of Antithrombotic Therapy. *Chest*, 141(2). doi:10.1378/chest.11-2298
- Doherty, J. U., Gluckman, T. J., Hucker, W. J., et al. (2017). 2017 ACC Expert Consensus Decision Pathway for Periprocedural Management of Anticoagulation in Patients With Nonvalvular Atrial Fibrillation. *Journal of the American College of Cardiology*, 69(7), 871-898. doi:10.1016/j.jacc.2016.11.024