



# NCSG Fellows Debate

February 18, 2023

Fellow: Sydney Greenberg, MD

Coach: Dan Kroch, MD

UNC Division of Gastroenterology & Hepatology

# Overview

*A 63yo male was admitted to Cardiology yesterday with **an NSTEMI**. Cardiology want to cath the patient and requests “GI clearance” for anemia before proceeding. **Hgb is 10.5 compared to baseline of 11.5 last year**. Patient has no GI complaints and no change in his normal bowel movements which are every two days. In the ED he had brown **heme positive stool**. He takes ASA 81mg and other meds for diabetes, hypertension and lipids. **His MCV is normal**.*

- There is not a strong indication for endoscopy
- The likelihood of endoscopy providing meaningful intervention is low
- *If* needed, endoscopy after MI is often safe
- In (*at best*) occult GI bleeding, endoscopy before cath poses undue risk to the patient

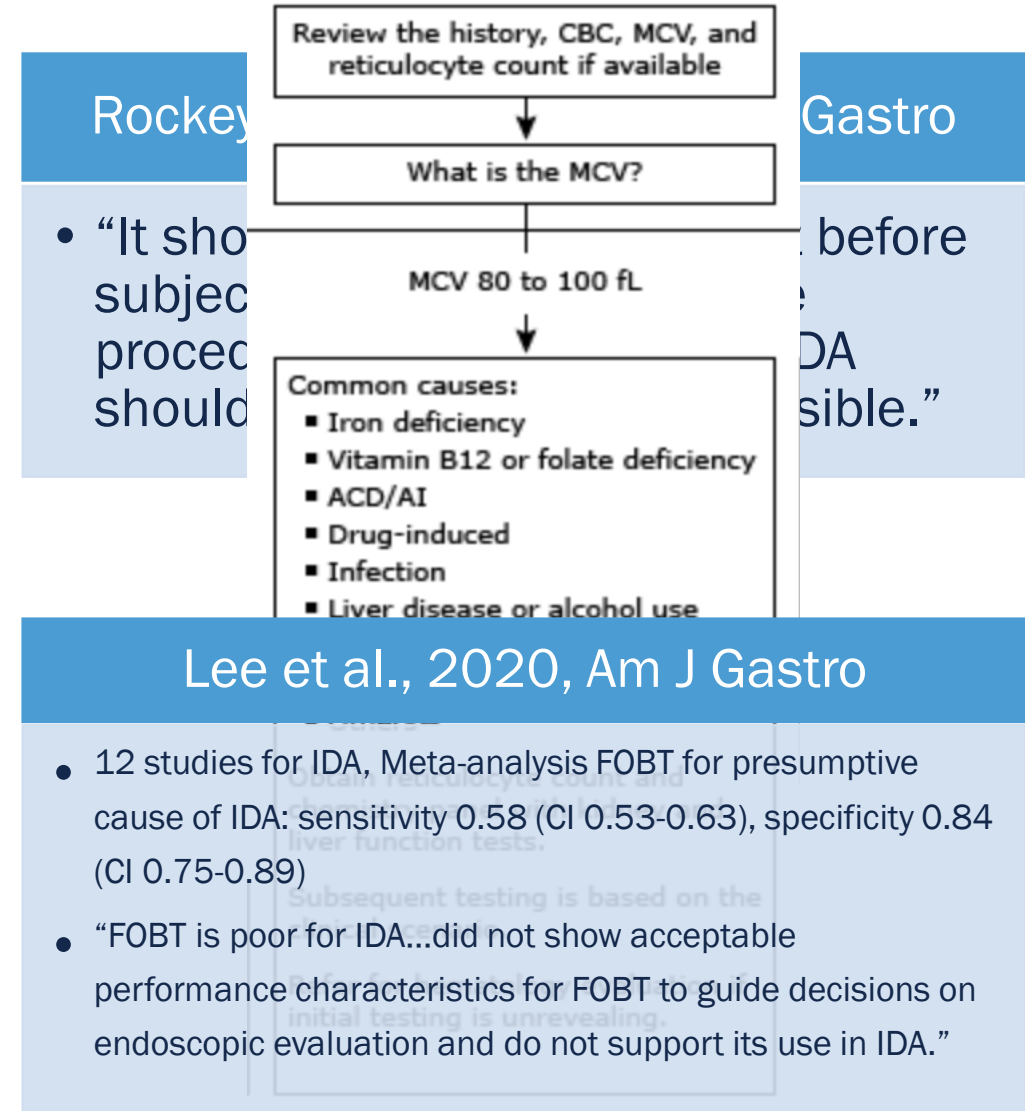
# Weak indication

- Endoscopy is not indicated as initial evaluation of asymptomatic normocytic anemia

**AGA Technical Review on Gastrointestinal Evaluation of Iron Deficiency Anemia**

- Hemoccult is not an appropriate diagnostic tool

**Use of Fecal Occult Blood Testing as a Diagnostic Tool for Clinical Indications: A Systematic Review and Meta-Analysis**



## The Utility of Upper Endoscopy in Patients with Concomitant Upper Gastrointestinal Bleeding and Acute Myocardial Infarction

- Lin et al, 2006, Dig Dis Sci
- Retrospective, single center. 183 patients undergoing EGD within 7d of AMI (105 = AMI first, 78 = UGIB first)
  - In the AMI group, only 17% received endoscopic treatment vs. 41% of UGIB group ( $p < 0.0004$ )
  - Occult GIB was a **predictor of not requiring endoscopic therapy** – only 4% (1 of 26 patients with this indication), OR 0.1 ( $p = 0.0037$ )

# GIB after ACS is manageable

**Safety of gastrointestinal endoscopy in patients with acute coronary syndrome and concomitant gastrointestinal bleeding**

**Safety and Efficacy of  
Esophagogastroduodenoscopy after  
Myocardial Infarction**

## Elkafrawy et al., 2021, World J Clin Cases

- Retrospective, 10 years, using Nationwide Inpatient Sample Database
- 0.75% (269,483 of 35,612,318) of pts admitted w/ ACS developed significant GIB during same admission
- Performing endoscopy (all forms) was associated w/ lower mortality (3.8% vs 8.6%,  $p < 0.001$ )

## Cappell et al., 1999, Am J Med

- Case-control (200ea), 6 hospitals, EGD within 30d of MI vs EGD without MI in past 6mo
- Overall complication rate 7.5%, but only 2% (4 pts) in those relatively stable, vs 1.5% (3 pts) in controls
- 11 of 13 complications were mild (transient hypotension or hypoxemia)

## Upper Endoscopy in Patients with Acute Myocardial Infarction and Upper Gastrointestinal Bleeding: Results of a Decision Analysis

Patrick Yachimski · Chin Hur

**Table 2** Results of the base-case analyses

	EGD	CATH	Difference (%)
Analysis 1 (OVERT)			
Deaths	97	600	-503 (5)
UGIB (recurrent or ongoing)	471	6,000	-5,529 (55)
EGD complications	800	0	800 (8)
UGIB/EGD complications combined	1,271	6,000	-4,729 (47)
Analysis 2 (OCCULT)			
Deaths	59	16	43 (0.4)
UGIB (recurrent or ongoing)	88	160	-72 (0.7)
EGD complications	800	0	800 (8)
UGIB/EGD complications combined	888	160	728 (7)

All results are the number of patients out of 10,000 patients in each strategy



UNC

SCHOOL OF  
MEDICINE

# Do good, or do no harm.

- Hippocrates

Definitive treatment for a known, serious medical condition should not be delayed for an evaluation of limited utility with increased risks that is predicated on an inadequate hypothetical.

# References

1. Rockey, D.C., Altayar, O., Falck-Ytter, Y., Kalmaz, D., 2020. AGA Technical Review on Gastrointestinal Evaluation of Iron Deficiency Anemia. *Gastroenterology* 159, 1097 – 1119.. doi:10.1053/j.gastro.2020.06.045
2. Lee MW, Pourmorady JS, Laine L. Use of Fecal Occult Blood Testing as a Diagnostic Tool for Clinical Indications: A Systematic Review and Meta-Analysis. *Am J Gastroenterol.* 2020 May;115(5):662-670. doi: 10.14309/ajg.000000000000495. PMID: 31972617.
3. Means, R. T., Robert A. Brodsky, and L. Kunins. "Diagnostic approach to anemia in adults." *UpToDate* 20 (2004).
4. Narula N, Ulic D, Al-Dabbagh R, Ibrahim A, Mansour M, Balion C, Marshall JK. Fecal occult blood testing as a diagnostic test in symptomatic patients is not useful: a retrospective chart review. *Can J Gastroenterol Hepatol.* 2014 Sep;28(8):421-6. doi: 10.1155/2014/189652. Epub 2014 Jul 11. PMID: 25014182; PMCID: PMC4210232.
5. Lin, S., Konstance, R., Jollis, J., Fisher, D.A., 2006. The Utility of Upper Endoscopy in Patients with Concomitant Upper Gastrointestinal Bleeding and Acute Myocardial Infarction. *Digestive Diseases and Sciences* 51, 2377 – 2383.. doi:10.1007/s10620-006-9326-7
6. Elkafrawy, A.A., Ahmed, M., Alomari, M., Elkaryoni, A., Kennedy, K.F., Clarkston, W.K., Campbell, D.R., 2021. Safety of gastrointestinal endoscopy in patients with acute coronary syndrome and concomitant gastrointestinal bleeding. *World Journal of Clinical Cases* 9, 1048 – 1057.. doi:10.12998/wjcc.v9.i5.1048
7. Cappell, M.S., Iacovone, F.M., 1999. Safety and efficacy of esophagogastroduodenoscopy after myocardial infarction. A preliminary version of this work was presented at a plenary session of the annual American Gastroenterology Association Convention of 1996 in San Francisco, California.. *The American Journal of Medicine* 106, 29 – 35.. doi:10.1016/s0002-9343(98)00363-5
8. Nikolsky E, Stone GW, Kirtane AJ, Dangas GD, Lansky AJ, McLaurin B, Lincoff AM, Feit F, Moses JW, Fahy M, Manoukian SV, White HD, Ohman EM, Bertrand ME, Cox DA, Mehran R. Gastrointestinal bleeding in patients with acute coronary syndromes: incidence, predictors, and clinical implications: analysis from the ACUITY (Acute Catheterization and Urgent Intervention Triage Strategy) trial. *J Am Coll Cardiol.* 2009 Sep 29;54(14):1293-302. doi: 10.1016/j.jacc.2009.07.019. PMID: 19778672.
9. Collins RT 2nd, Doshi P, Onukwube J, Fram RY, Robbins JM. Risk Factors for Increased Hospital Resource Utilization and In-Hospital Mortality in Adults With Single Ventricle Congenital Heart Disease. *Am J Cardiol.* 2016 Aug 1;118(3):453-62. doi: 10.1016/j.amjcard.2016.05.020. Epub 2016 May 18. PMID: 27291967.
10. Al-Mallah M, Bazari RN, Jankowski M, Hudson MP. Predictors and outcomes associated with gastrointestinal bleeding in patients with acute coronary syndromes. *J Thromb Thrombolysis.* 2007 Feb;23(1):51-5. doi: 10.1007/s11239-006-9005-8. PMID: 17186397.
11. Gaglia MA Jr, Torguson R, Gonzalez MA, Ben-Dor I, Maluenda G, Collins SD, Syed AI, Delhaye C, Wakabayashi K, Belle L, Mahmoudi M, Hanna N, Xue Z, Kaneshige K, Suddath WO, Kent KM, Satler LF, Pichard AD, Waksman R. Correlates and consequences of gastrointestinal bleeding complicating percutaneous coronary intervention. *Am J Cardiol.* 2010 Oct 15;106(8):1069-74. doi: 10.1016/j.amjcard.2010.06.011. PMID: 20920640.
12. Yachimski, P., Hur, C., 2009. Upper Endoscopy in Patients with Acute Myocardial Infarction and Upper Gastrointestinal Bleeding: Results of a Decision Analysis. *Digestive Diseases and Sciences* 54, 701 – 711.. doi:10.1007/s10620-008-0403-y
13. Amsterdam, E.A., Wenger, N.K., Brindis, R.G., Casey, D.E., Ganiats, T.G., Holmes, D.R., Jaffe, A.S., Jneid, H., Kelly, R.F., Kontos, M.C., Levine, G.N., Liebson, P.R., Mukherjee, D., Peterson, E.D., Sabatine, M.S., Smalling, R.W., Zieman, S.J., 2014. 2014 AHA/ACC Guideline for the Management of Patients With Non–ST-Elevation Acute Coronary Syndromes. *Journal of the American College of Cardiology* 64, e139 – e228.. doi:10.1016/j.jacc.2014.09.017