

## Introduction

The outcome of patients with Inflammatory bowel disease (IBD) presenting with coronary artery disease (CAD) requiring percutaneous coronary intervention (PCI) has limited evidence in the literature. The aim of this study is to examine the predictors and outcomes of 90-day readmissions in IBD patients requiring PCI.

## Results

- 1,851,473 patients underwent PCI between 2016 and 2019.
- 9295 (0.5%) patients had IBD. The mean age was 65.3 in patients with no IBD and 67.7 in patients with IBD.
- Total of 239105 readmissions were identified, 1522 (0.6%) were patients with IBD.
- The rate of admission for patients with IBD was 16.3% as compared to 12.9 % for patient without IBD (p<0.001).
- Multivariate logistic regression was performed and showed OR of 1.31 (95% CI 1.18,1.45) (P<0.001) for 90 days readmission for patients with IBD who underwent PCI as compared to those without IBD.
- Gastrointestinal bleed occurred in 7 % in patients readmitted who had IBD as compared to 3 % in patients without IBD, OR 1.89 (95% CI 1.57,2.27) (P<0.001).
- Most important predictors of readmission were history of coronary artery disease (CAD), Congestive heart failure (CHF) and renal failure.

## Methods and Materials

- The International Classification of Diseases Code,10<sup>th</sup> Revision Clinical Modification (ICD-10) was used to identify patients who were hospitalized for PCI.
- Patients were identified from the Healthcare Cost and Utilization Project databases (HCUP) using the National readmission database (NRD).
- Patients were classified into 2 groups depending on whether they have IBD or not.
- Outcomes were all-cause and cause-specific 90-day readmissions and mortality rate during readmission.
- Kaplan-Meier analysis was used to assess the association of IBD with 90-day hospital readmission.

## Conclusions

- It appears that IBD is an independent risk factor for re-admission in patients undergoing PCI.
- Bleeding is a major cause of readmission which might be related to use of anticoagulation and antiplatelet agents in patients undergoing PCI.
- Further studies are needed to identify other possible causes of readmission and optimal means to control them.

Fig 1: Multivariate logistic regression analysis for predictors of readmission

|                 | OR   | 95% CI    | P-value |
|-----------------|------|-----------|---------|
| CHF             | 1.35 | 1.11-1.65 | <0.001  |
| CAD             | 1.46 | 1.23-1.89 | <0.001  |
| Renal failure   | 1.55 | 1.25-1.92 | <0.001  |
| Blood loss      | 1.2  | 0.61-2.38 | 0.6     |
| Prior CABG      | 1.11 | 0.53-2.35 | 0.78    |
| DM, complicated | 1.15 | 0.92-1.44 | 0.22    |

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