# Identification of Anaemia in Inflammatory Bowel Disease While on Biologic Therapy

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## Introduction

Anaemia (Hb <12g/dL in women, <13.5g/dL in men) is the most common systemic complication and extraintestinal manifestation of Inflammatory Bowel Disease (IBD)[1]

Patients most commonly have Iron Deficiency Anaemia (IDA) secondary to chronic blood loss and impaired GI absorption, however they are also at risk of B12 & Folate malabsorption, and Anaemia of Chronic Disease.

Over 1/3 of IBD patients suffer recurrent anaemia[2], which has been shown to impact on patient quality of life- physical, emotional, and cognitive functions, the ability to work, hospitalization, and healthcare costs.[3]

## Aim

1. To identify the prevalence of Anaemia in the cohort of IBD patients currently receiving Biologic Infusions.

2. To assess the validity of the use of Platelet Count as a marker for active disease, and anaemia.

## Methods

- A cross-sectional analysis was conducted of 122 patients with IBD receiving biologic infusions in a Model 2 hospital in Tipperary.

- Data collection included chart, medication and biochemistry review.

- A Fisher Exact Test was performed to examine the significance of the association between Thrombocytosis and the prevalence of Anaemia, indicating Active Disease

## Results

- A total of 122 patients with IBD diagnoses were reviewed.
53 patients (43%) were female. The mean age was 40.6 years.

- 77 patients (63%) were receiving Infliximab, and 45 (37%) receiving Vedolizumab.

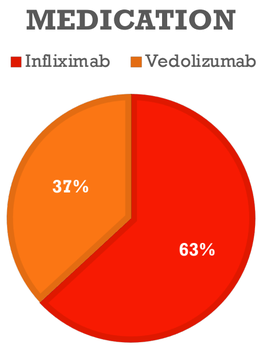


Fig. 1. Distribution of Biologic Agents

- The overall prevalence of anaemia for the group was 28 patients (23%) 22% for Vedolizumab (10 patients), 23% for Infliximab (18 patients).

- 32% of the Anaemia group displayed either microcytosis or hypochromia, while a further 36% displayed both. 21.5% had a normocytic anaemia, while 10.5% had macrocytosis.

## Results

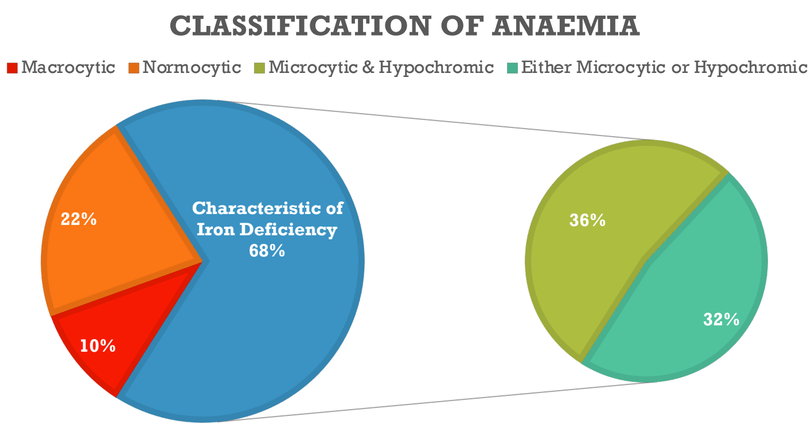


Fig. 2. Classification of Anaemia by Subtype

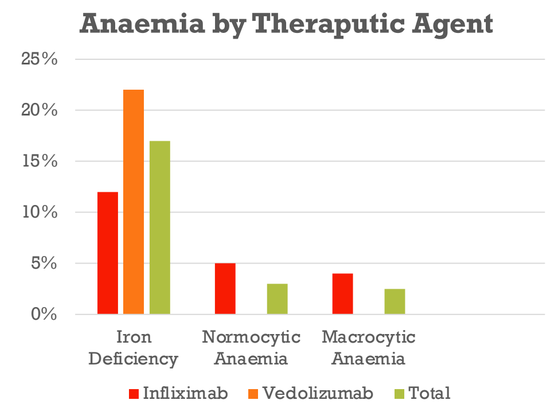


Fig. 3. Prevalence of Anaemia Subtypes by Theraputic Agent

- Fisher Exact test showed a positive correlation between patients who presented with Anaemia suggestive of Active Disease, and Acute Thrombocytosis ($p<0.01$)

| | Thrombocytosis | Normal Platlets | Total |
|---|---|---|---|
| Anaemia | 12 | 16 | 28 |
| Normal Hb | 1 | 93 | 94 |
| Total | 13 | 109 | 122 |

## Discussion

- Overall, our prevalence study, showed a significant minority of IBD patients (23%) display anaemia, with >65% of those who were anaemic, showing features consistent with Iron deficiency.

- ECCO guidelines recommend IV Iron as first line replacement in IBD, and the screening of all patients 3-6 monthly with Iron Studies, Ferritin, Haemoglobin, and CRP.
This project underlines the importance of compliance with these guidelines on a continuous basis, to avoid progression, and systemic manifestations of Chronic Anaemia.

- Fisher Exact test shows a positive correlation between raised platelet count, and patients presenting with anaemia. As anaemia is associated with active IBD, we recommend consideration of including platelet count as an indicator of active disease and anaemia.

## References

1. The European Crohn's and Colitis Organisation [ECCO], European Consensus on the Diagnosis and Management of Iron Deficiency and Anaemia in Inflammatory Bowel Diseases, *Journal of Crohn's and Colitis*, Volume 9, Issue 3, March 2015, Pages 211–222

2. Gasche C, Lomer MC, Cavill I, Weiss G. Iron, anaemia, and inflammatory bowel diseases. *Gut*. 2004;53(8):1190-1197.

3. Ershler W.B., Chen K., Reyes E.B., Dubois R. Economic burden of patients with anemia in selected diseases. *Value Health*2005;8:629-38