Outcomes of an Anaemia Service Evaluation (ASE) using the IBD Registry

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Introduction

Iron deficiency (ID) and iron deficiency anaemia (IDA) are frequent complications of Crohn's disease (CD) and Ulcerative Colitis (UC).

The UK IBD audit of inpatient care found 56% of those with IDA did not receive iron, highlighting significant undertreatment.[1] The standard of care for IBD outpatients is unknown, but IBD patients with IDA rarely have iron deficit <1000 mg.[2] Effective treatment of ID/IDA requires sufficient dosing of iron.

Assessing iron status in IBD patients can be challenging as tests may be unreliable in the presence of inflammation. ECCO guidelines state FBC, CRP & ferritin are the minimum diagnostic measures required to detect ID/IDA.[3]

Method

The IBD Registry Web Tool was used to prospectively input data, including demographics, disease activity scores and IBD Control Questionnaires. Blood results were recorded using the Anaemia Service Evaluation parameters, which the web tool was adapted to include.

20 consecutive patients (10 UC, 10 Crohn's disease (CD) were recruited at 5 UK hospitals and followed for around 12 months.

Anaemia defined as Hb <120 g/l ♀ or <130 g/l ♂)

1) Iron deficiency defined as MCV <80 fl and/or ferritin <30 µg/l if CRP ≤5 mg/l OR
2) Ferritin ≥30 µg/l to <100 µg/l if CRP >5 mg/ml and/or TSAT <20%

Iron deficiency anaemia defined as presence of both anaemia and iron deficiency as above.

Data presented is as of February 2018

Results

Baseline Demographics

Data was collected from:

- 47 CD patients
- 45 UC patients
- 2 IBD-U patients

Mean Age was 46 yrs 6 months (range 20-91 yrs)

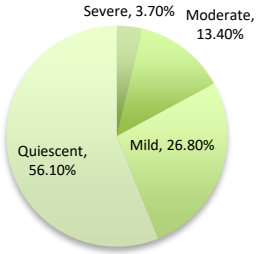
45 (48%) patients were male and 49 (52%) female

Disease Activity

Disease activity scores were available from 70 patients at baseline

- Mean Harvey Bradshaw Index (HBI): 3.7 (55 patients)
- Mean UCDAI: 2.4 (13 patients)

Physician Global Assessment was calculated to assess disease activity:



Monitoring

Mean number of follow up visits recorded per patient:

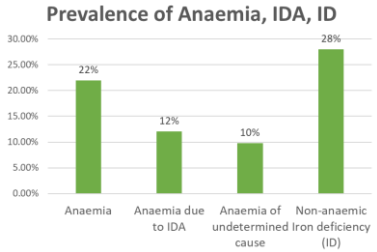
CD ♀ 2.6 ♂ 4.0
UC ♀ 3.7 ♂ 3.7

Haemoglobin levels (g/l) over 12 months (136 Hb results available):

	Male	Female
CD Mean (range)	132.5 (105-156) n=26	132 (90-166) n=35
UC Mean (range)	139.5 (96-172) n=42	120 (107-148) n=30
IBDU Mean (range)	No results available	136 (135-137) n=3

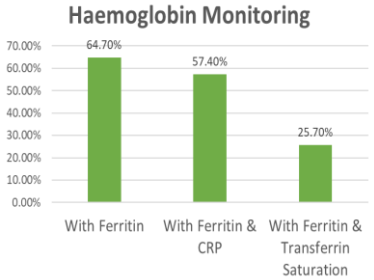
ID/IDA

82 patients had ≥ 1 recorded haematinic and 18 (22%) of these had 26 anaemic episodes:



Diagnostics

Of the 136 recorded Hb results, only a proportion were combined with other diagnostics suggested by ECCO guidelines as required to detect ID:



Iron need

Of 14 recorded episodes of anaemia where it could confidently be assessed to be due to iron deficiency 12 had the information on the Registry Web Tool to allow calculation of iron requirements for dosing therapy, based on simplified dosing from ECCO guidelines.

Calculated iron needs were > 1000 mg.

Anaemia treatment

7 patients received documented iron therapy (4 oral, 3 IV), with doses unknown.

3 Patients were taking vitamin B12 or folate, one of whom was currently anaemic.

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References

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3. Dignass AU et al., J Crohn's Colitis (2015) 9(3): 211-222

Conclusion

ID and IDA are prevalent in this mixed IBD outpatient population, our recorded data suggest that ECCO guidelines on the diagnosis of ID/IDA are not always followed, hence ID and IDA are likely underdiagnosed, and therefore symptoms related to IDA undertreated. Whilst the lack of recorded data here requires careful interpretation, initial analysis suggests that patient iron needs are > 1000 mg, in agreement with current literature, but that these iron needs are largely unmet at present.

The IBD Registry Web Tool as a platform can feasibly be used in the outpatient clinic setting, to facilitate monitoring and treatment of patients. Inclusion of anaemia parameters should drive quality improvement and improve patient care for IBD patients with ID and IDA.

IBD Registry

This Joint Working Project involved collaboration between the IBD Registry, Pharmacosmos and 5 UK hospitals. The aim was to determine the standard of care for IBD outpatients, to enable quality improvements in patient care.

The IBD Registry is the first ever UK wide repository of anonymised IBD patient data including:

- Clinical summary
- Characteristics of disease
- Clinic and GP letters
- Biologics management
- MDT discussions

The IBD Registry Web Tool allows easy access to records driving standardisation, benchmarking against national performance and continued improvement in patient care between departments, informing commissioning and service design.

Continued recording of patient data into the Registry increases understanding of long term outcomes and supports IBD research.

The IBD Registry was customised to create the Anaemia Service Evaluation (ASE), and the 5 UK hospital sites were asked about the feasibility of using the adapted webtool.

Prospective completion of a small number of additional fields allowed real-world data to be captured, so as to quickly impact on improving patient care, making this a feasible use of the IBD Registry Webtool.

Inclusion of IDA parameters in the routine Registry dataset could provide a reliable, meaningful way to capture quality improvement data on ID/IDA.

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