A review of the factors affecting remission rates in a tertiary paediatric IBD cohort

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1. Introduction

Inflammatory bowel disease (IBD) is a chronic condition that is commonly diagnosed in the paediatric patient cohort[1]. The condition manifests as intestinal and extraintestinal symptoms[1]. Due to its relapsing-remitting nature, it is important to tailor the treatment to each patient aiming for sustained steroid free remission (deep remission)[2]. The therapies that are available range from dietary interventions to biologics[2].

Clinical scoring systems such as PUCAI and PCDAI (derived from Physicians global assessment PGA[3]), observing biological markers in the blood and stool, endoscopic and radiological assessment are all used to monitor disease activity[2]. A treatment target is derived from the observations above. It is more likely that patients who are seen regularly are more likely to have the above indices monitored compared to patients on oral medication remotely monitored.

The aims of this project are to identify the population of patients in remission in the IBD cohort and to identify any local factors which affect this. My hypothesis is that patients with an increased number of hospital visits hence more monitoring are more likely to be in remission.

2. Aims

The aims of this project are:

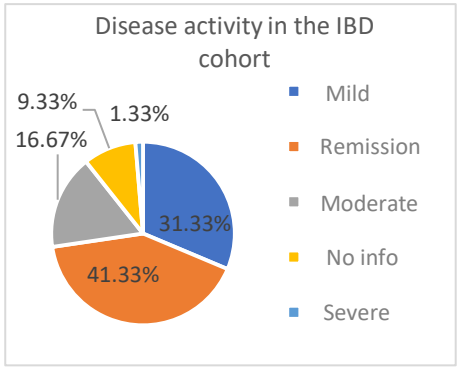
1. To identify the population of patients in remission in the IBD cohort
2. To identify what local factors, remediable by quality improvement, affect remission rates
3. To determine whether frequent patient contact affects this

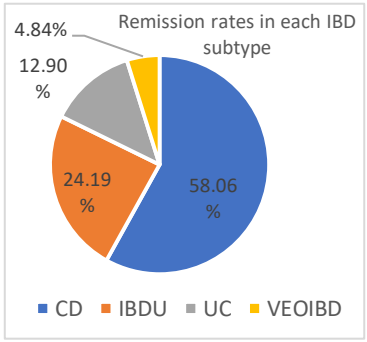
3. Methods

A retrospective review was carried out using the data available on electronic hospital records. The data included: patient demographics, type of treatment, most recent biochemical and radiological assessment results and hospital visits of paediatric IBD patients at an NHS hospital. All IBD subtypes were included. A Microsoft Excel spreadsheet was used to collect the data which was then reviewed by a senior consultant and subsequently analysed.

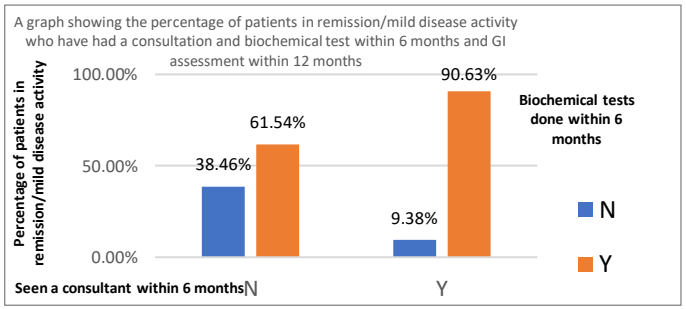
4. Results

In total, 150 patients were included. The remission rates and disease activity in all 150 patients are presented in the charts below:

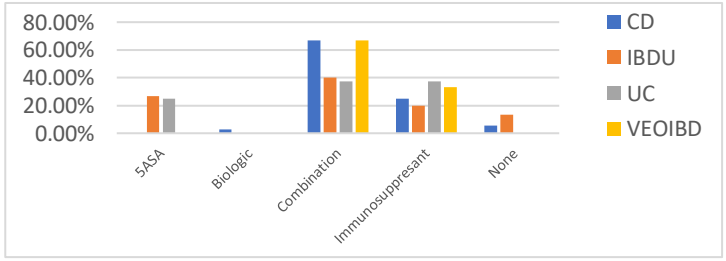




The effect of local factors on remission rates is shown below:



A graph showing the type of treatment taken by patients in remission:



5. Discussion

41.33% of patients are in remission (72.67% of these patients were either found to be in remission or had mild disease activity). Highest remission rates/mild disease activity was observed in patients who had seen a consultant and had biological tests done within 6 months (90.63%) as opposed to patients who had not (38.46%). This suggests that increased patient contact with IBD team (leading to more monitoring) is associated with decreased disease severity. There might also be role for physically seeing the patients (conscious and subconscious assessment). A review article emphasised the importance for improving quality of IBD care of monitoring the severity of disease in paediatric IBD patients using a holistic approach including blood markers as well as endoscopic results[3]. These findings have relevance for the monitoring of IBD patients in the current COVID pandemic where more remote approaches have been pragmatically favoured. It is important to ensure disease assessment scores are robustly collected which will guide a proactive management approach, leading to best patient outcomes.

More patients receiving combination treatment of either 5ASA/a biologic or an immunosuppressant were found to be in remission than patients receiving just one or none of these treatments. A systematic review exploring the correlation between the use of biologics and hospitalization/surgery rates found that the introduction of anti-TNF biologics has reduced hospitalization by 50% and surgery by 33-77%[4]. This suggests that biologics are an important factor in increasing remission rates in IBD patients.

6. Limitations:

- The cohort of paediatric IBD patients used in this audit was from only one institute
- Information regarding recent severity scoring was missing in a lot of the patients
- There was little data on patients that were not on biologics (eg outreach patients on oral medication alone). This illustrate the need for more robust monitoring of symptom/biologic – being remote (and therefore thought stable), they are more likely to be managed reactively and not proactively

7. Conclusion

There appears to be a positive correlation between remission rates and regular visits with an IBD clinical team and regular biochemical monitoring. Physically seeing the patients may be an important part of the monitoring process. All IBD patients should be monitored as frequently as possible to ensure higher remission rates.

Acknowledgements

1- Dr Attah Ocholi- Project tutor

References

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