



Diagnosis of Inflammatory Bowel Disease in Mildly Elevated Faecal Calprotectin: Observation from a Clinical Audit in District Hospital in the UK

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Abstract

Faecal calprotectin (FC) is a marker to diagnose Inflammatory bowel disease (IBD), that is Ulcerative Colitis & Crohn's Disease. Identifying IBD from other gut related disorder is of prime importance in managing the condition. Faecal calprotectin is cheap and non-invasive, it also helps in assessing the further need of any possible invasive procedure such as colonoscopy or imaging studies. The main objective of this observational study was to diagnose new IBD in mildly raised faecal calprotectin value (60ug/g-300ug/g). This study was done in a district-level hospital in the UK. During the study, we noticed that a large number of patients had numerous investigations including colonoscopy and MRI imaging, and only one patient was diagnosed with new IBD in mildly elevated faecal calprotectin. These findings were presented at Gastroenterology audit meeting held at our hospital. For further improvement of clinical practice and to reduce number of invasive investigation, below recommendation can be followed.

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Background

The main use of FC is to monitor disease activity in Inflammatory Bowel Diseases (IBDs) and to discriminate IBD from nonorganic bowel disease. The objective of this study was to newly diagnose IBD in patients with mildly elevated Faecal Calprotectin values (60ug/g-300ug/g). The study collected results of those patients with mildly elevated FC values and analyzed them with their further investigation such as colonoscopy & biopsy findings as well as MRI Small bowel interpretation.

Material & methods

The study collected the results of all Faecal calprotectin done in a period of one year (October 2020 -October 2021) with the help of Pathology department in District Hospital. The study involved only those patients whose faecal calprotectin results were between 60ug/g-300ug/g and the rest were excluded; thus, the total number of patients for this study became 456.

Among these 456 patients, this study also analyzed how many had Colonoscopy, Biopsy and MRI Small Bowel done and what were the findings as well as to find out newly diagnosed IBD. This study also excluded those patients with a prior diagnosis of IBD.

Recommendation

It would be ideal to withhold any drugs that give false positive faecal Calprotectin values. In addition, repeating faecal calprotectin in two weeks would also assess the need of further invasive investigation.

Limitations

FC can also be raised in those patients who are on Nonsteroid Anti-Inflammatory Drugs (NSAIDs), Acetylsalicylic Acid (ASA), Proton-Pump Inhibitors (PPIs) which would give false positive results. The study was limited to obtaining a patient's medication. The study also noted not all those who had a colonoscopy had their biopsy taken.



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Results

The mean age was 51 and females outnumbered men. The study found out that out of 456 patients, 20.7% (94) patients had Colonoscopy done and among those who had colonoscopy, 84% (74) had Biopsy done. In addition, out of 20.7%(94) patients who had colonoscopy, 16% (15) had MRI Small Bowel. The study analyzed results of colonoscopy finding & biopsy results as well as MRI Small bowel interpretation and found out that only 0.22% (1) patient was newly diagnosed with IBD.

Conclusion

Faecal Calprotectin is cheap and non-invasive, and it remains as most important tool in identifying IBD from other nonorganic bowel diseases. A normal Faecal Calprotectin test reduces the

need for referral to colonoscopy to evaluate IBD. The study concludes that in mildly elevated FC, it would be ideal to repeat FC values in two weeks and to evaluate the need for further need for any invasive and imaging investigation. This would potentially reduce the number of investigations as well cost needed for such investigation.

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