Vol 1| Issue 8| 2020

Enteron

Dear Doctor,

Greetings from Micro Labs limited.

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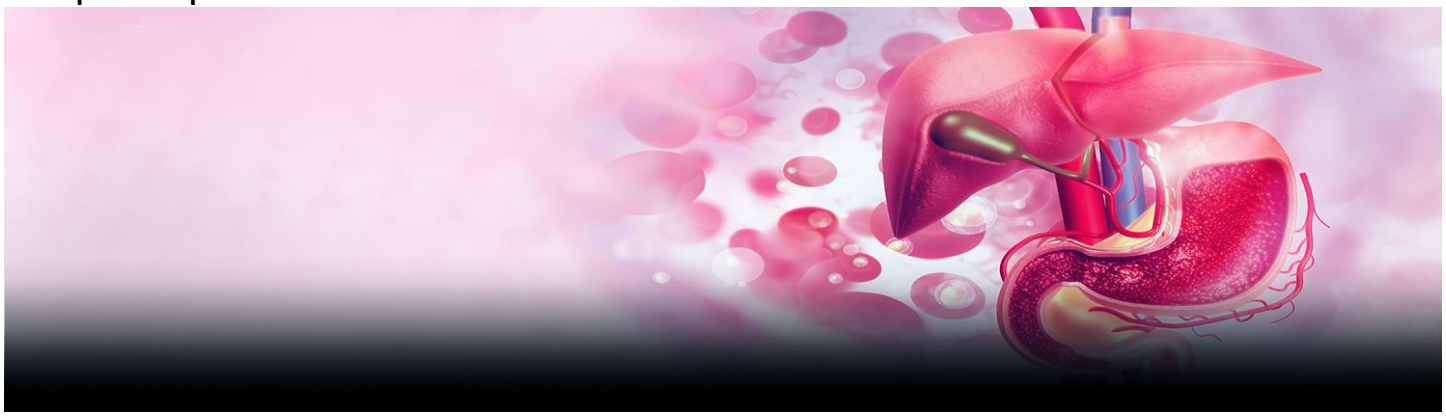
Medical Team, Micro Labs Ltd

AGA Guideline: Management of eosinophilic esophagitis

According to recent guidelines by the American Gastroenterological Association and the International Task Force on Allergy-Immunology Clinical Criteria, patients with eosinophilic esophagitis can receive topical steroids instead of oral steroids or no medication. In a randomized study of eight double-blind clinical trials, monotherapy with topical budesonide or topical fluticasone was around 61 per cent more likely than placebo to induce histological remissions in patients with eosinophilic esophagitis (relative probability of failure to achieve remission, 0.39; 95 per cent trust range, 0.26-0.58), Ikuo Hirano, MD, of Northwestern University, Chicago, reported. Although these studies varied methodologically, the findings were rigorous enough to merit a firm recommendation for topical steroids, Dr. Hirano and the recommendations co-authors, reported in Gastroenterology, wrote. In children and adults with asthma, the same inhaled steroid agents are deemed very healthy for usage and are regularly used in their primary treatment.

The other statements in the Guidance are graded as optional, indicating a shortage of convincing data of sufficient quality. For example, to date only one study has contrasted topical and oral steroids for eosinophilic esophagitis patients. Children also benefited from fluticasone (two puffs four times daily) and oral prednisone (1 mg / kg twice daily) in this pediatric study, but prednisone induced side effects (weight gain and cushingoid appearance) in 40% of patients, while topical steroids caused oral candidiasis (thrush) in only 15% of patients. The Guidelines suggest the differences between juvenile and adult eosinophilic esophagitis encourage the usage of topical vs. oral steroids in all classes.

Eosinophilic esophagitis appears to be progressive, which if left unchecked, may lead to intermittent dysphagia, oesophageal impacts, which stringency. For this cause, the recommendations call for remitted patients to continue for topical steroids as maintenance therapy given very poor faith in any form of long-term therapy's expected benefits.



In a very limited study, placebo was outperformed 1 year of low-dose budesonide maintenance therapy (0.25 mg twice daily), but only 36 per cent of patients retained fewer than 5 eosinophils per high-power area. Certain experiments produced contradictory findings. The recommendations find maintenance therapy with topical steroids, proton pump inhibitors, and removal diets "rational choices" comprising "a preferred control area" awaiting further details.

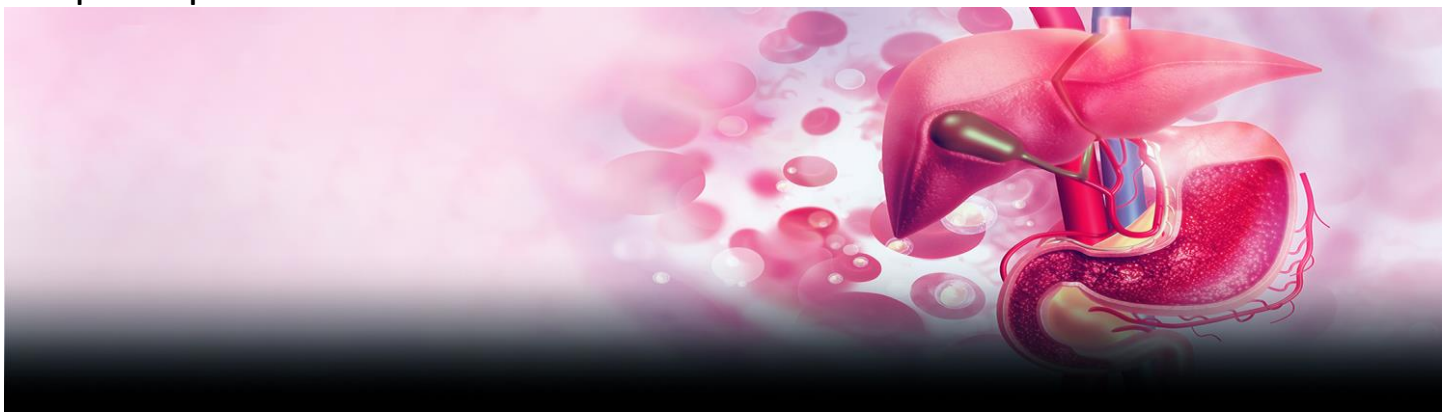
Dietary treatments for eosinophilic esophagitis include the standard regimen (amino acid-based formulae), the six-food diet for systematic removal, and the avoidance of allergy-based products. The recommendations provided moderate-quality data for the elemental diet, which caused histologic remissions in approximately 94 percent of patients in six retrospective single-arm studies. However, patients can fail to stick to both the standard diet and the diet for the removal of six items, which has less data to support it. Therefore, patients "may fairly refuse" such care choices and "might choose complementary medication or nutritional treatments" over a diet focused solely on food allergens, assessments for which the recommendations say are theoretically unreliable.

Esophageal dilation is recommended for patients with stricture based on a systematic review in which 87% of patients improved with this therapy. However, dilation does not resolve the oesophageal inflammation associated with eosinophilic esophagitis, and the conclusion that there will be little therapeutic progress if dilation was not done possibly overestimates its treatment advantage, despite the recorded symptom-placebo reaction observed in controlled trials, according to the guidelines. In comparison, owing to the longitudinal, single-arm nature in all but one of the studies, and lack of a common description for what constitutes clinical progress, the proof for dilation was deemed poor quality.

Anti-IgE treatment is not indicated-in the only study performed to date, it has declined to enhance signs of esophageal eosinophilia. Owing to a lack of data, the recommendations claim that patients can not undergo montelukast, cromolyn sodium, immunomodulators, anti-tumor necrosis factor (anti-TNF) therapies, or interleukin (IL)-5, IL-13, or IL-4 therapies in the concept of a trial.

Exposure to dietary antigens causes eosinophilic esophagitis which sometimes overlaps with other atopic disorders such as asthma, eczema, which allergic rhinitis. It has no licensed therapies in the United States, though a budesonide tablet formulation was licensed by the European Medicines Authority in 2018.

Source: Hirano I et al. AGA Institute and the Joint Task Force on Allergy-Immunology Practice Parameters Clinical Guidelines for the Management of Eosinophilic Esophagitis. Gastroenterology 2020; 158:1776–1786



Ketotifen in irritable bowel syndrome with diarrhea

INTRODUCTION

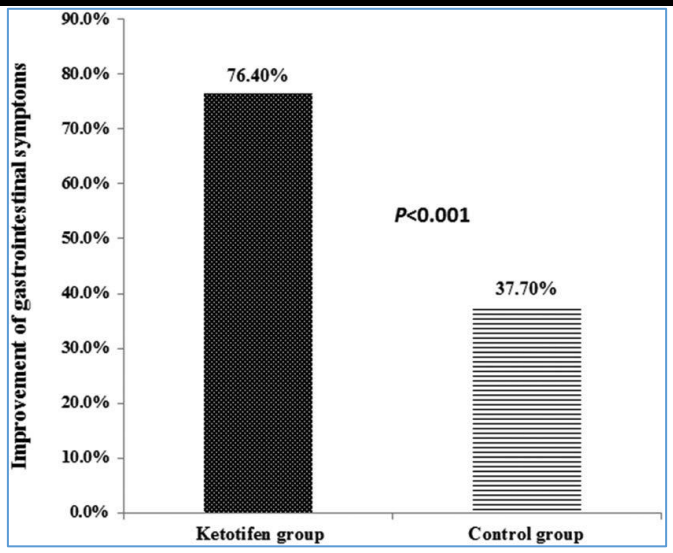
Irritable bowel syndrome (IBS) is a chronic bowel condition characterized by the major clinical symptoms of stomach distress or gastrointestinal irritation with shifts in the form of the stool and bowel behavior. The mean rate of IBS was 38.5 per 10 000 individual- years for 19 studies analyzed. IBS greatly decreases the quality of life and efficiency of people impacted by the practice. IBS with diarrhea (IBS-D) is one of the more popular forms of IBS in China, and occurs mainly in people aged 20 to 50 years. Good care is missing overall. Ketotifen can inhibit the release of allergy mediators by sensitized mast cells and can regulate the mast cell membrane and avoid lysis and degranulation of the cell membrane, thus reducing the release of numerous inflammatory mediators such as histamine and tryptase. Ketotifen has the main purposes of avoiding and managing hypersensitivity disorders, and has been commonly used to combat allergic conditions such as bronchial asthma, allergic rhinitis, and severe or recurrent urticaria. The aim of the study was to investigate the clinical efficacy and safety of ketotifen for the treatment of irritable bowel syndrome with diarrhea (IBS-D).

METHODS

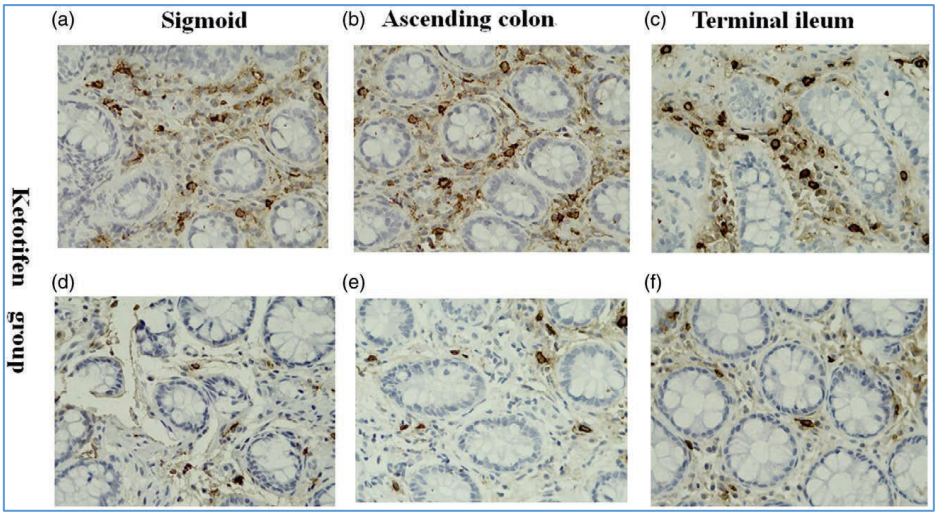
A total of 108 enrolled IBS-D patients were randomly divided into a ketotifen group (n = 55) and a control (placebo) group (n = 53). The patients in the ketotifen group received ketotifen tablets (1 mg, oral) two times daily; patients in the control group received oral placebo for 8 weeks. Before and after 8 weeks of treatment, gastrointestinal symptoms, anorectal sensory function and the number and activity status of mast cells were assessed for both groups.

RESULTS

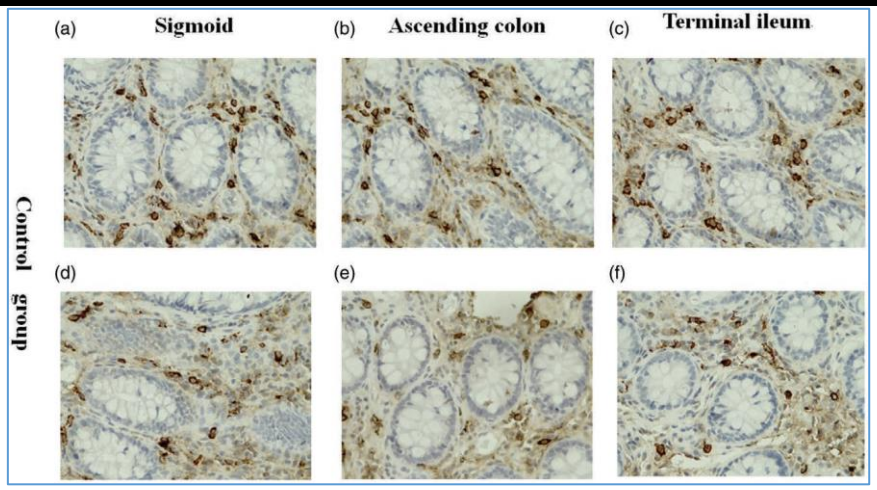
1. The overall effective rate of gastrointestinal symptom improvement in the ketotifen group was significantly higher than that in the control group (76.4 vs. 37.7%, $P < 0.001$).
2. First sensation, defecation urgency and discomfort/pain threshold in the ketotifen group improved significantly after treatment ($P < 0.05$); no significant changes were observed in the control group ($P > 0.05$).
3. In the ketotifen group, the number of mast cells in the terminal ileum decreased, and the percentages of degranulated mast cells in the sigmoid colon, ascending colon and terminal ileum decreased significantly after treatment compared with before treatment; these differences were statistically significant ($P < 0.01$). In the control group, the number of mast cells and the percentages of degranulated mast cells in various sites did not change significantly before and after treatment ($P > 0.05$).
4. Six patients (10.9%) in the ketotifen group experienced drowsiness and fatigue, but the symptoms disappeared after 1 week of treatment.



Improvement of gastrointestinal symptoms in the ketotifen group and control group. The total improvement rate for the ketotifen group was significantly higher than that for the control group: 76.4% (42/55) vs. 37.7% (20/53), P < 0.001.



Representative photomicrographs showing tryptase-positive mast cells in the sigmoid colon, ascending colon and terminal ileum of an IBS-D patient in the ketotifen group before treatment (a–c) and after treatment (d–f). IBS-D, irritable bowel syndrome with diarrhea.



Photomicrographs showing tryptase-positive mast cells in the sigmoid colon, ascending colon and terminal ileum of an IBS-D patient in the control group before treatment (a–c) and after treatment (d–f). IBS-D, irritable bowel syndrome with diarrhea.

CONCLUSION

Ketotifen greatly alleviated gastrointestinal complaints and improved visceral hypersensitivity in IBS-D patients. The therapeutic impact of ketotifen is due to a reduced number of mast cells and decreased activity in the intestinal mucosa, especially in the terminal ileum.

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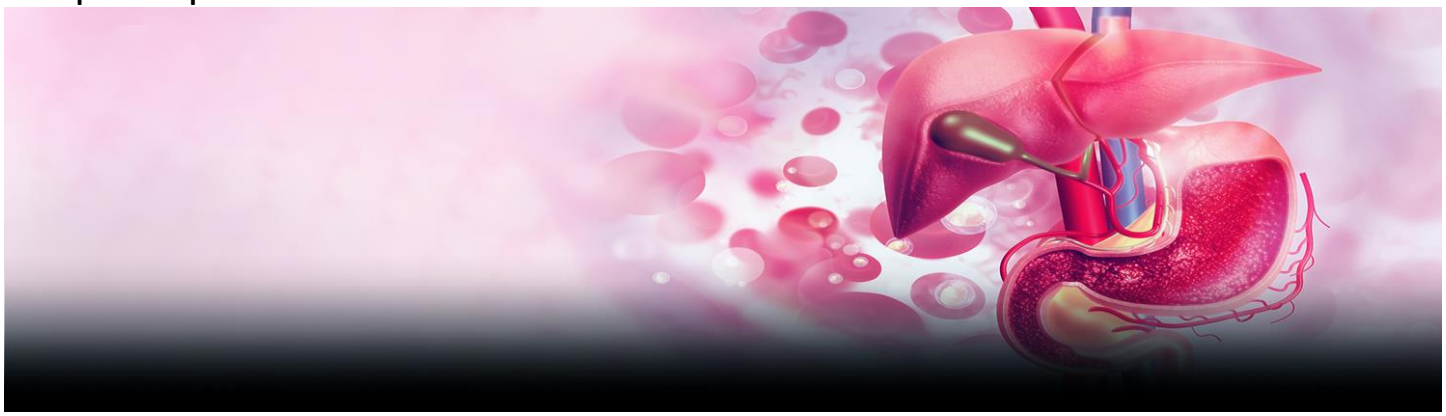

Capsule Endoscopy in the Diagnosis of Iron Deficiency Anemia

INTRODUCTION

Iron deficiency anemia (IDA) impacts 2 to 5 percent of males and postmenopausal women globally, and is believed to account for 50 percent of all sources of anemia globally, totalling 13 percent of all gastroenterologist referrals. Throughout the developing world, it is believed that certain patients with mysterious IDA have occult gastrointestinal bleeding (GIB) as the cause. When examinations involve a negative bidirectional endoscopy, a negative celiac scan, even where there is no apparent blood loss, latent blood loss from a limited source of the intestine is regarded. Overall, 30 percent of IDA patients have a negative bidirectional endoscopy; as such, many of these patients are recommended for endoscopy of the small bowel capsule (CE). Latest recommendations recommend that CE will be followed in specified cases of IDA with negative upper endoscopy, colonoscopy, and celiac screen; however, there is little data on the diagnostic yield (DY) and whether such cases may be chosen optimally. Although most studies have examined the CE DY for obscure GIB, identified as both over-obscure (hematochezia and/or melena) and occult-obscure (IDA and/or positive fecal occult blood test), few studies have been conducted which divide these groups into distinct entities. Current recommendations on the usage of capsule endoscopy (CE) in iron deficiency anemia (IDA) have produced some confusion. The study was aimed to examine the yield of CE in diagnosing the cause of IDA and to define clinical parameters that predict higher diagnostic yields.

METHODS

A total of 1351 individuals underwent CE in Winnipeg between 2005 and 2016. All studies were reported by 1 reading physician. Data included demographics and requested information on medication use, prior imaging studies, and haemoglobin and ferritin levels. In a total of 620 (46%) patients, CE was indicated for occult gastrointestinal bleeding or IDA. Positive findings on CE were separated into “definite” and “possible.” Multinomial regression analysis was used to determine the variables correlated with definite CE findings. A survey analysis was then used to assess how the study results impacted further management.

RESULTS

With regard to the 620 patients, the mean age was 62.9 years, mean hemoglobin level was 89 g/L, and median ferritin level was 9 µg/L. A total of 210 (33.9%) patients had positive findings (definite: 23%, possible: 10.8%). Vascular ectasias were the majority of definite findings (47.5%). Predictors of definite findings were age (relative risk ratio: 1.04; 95% confidence interval: 1.02- 1.06) and male sex (relative risk ratio: 1.88; 95% confidence interval: 1.25-2.83). An overall 12.7% of positive studies required therapeutic intervention, with 65.8% undergoing further workup.

Diagnosis	n (%)
Definite	143 (23)
Possible	67 (10.8)
None	410 (65.9)

Results of Capsule Endoscopy Study (N=620)

	n (%)		
Age (y)	Definite	Maybe	Pooled Diagnostic Yield
<40 (N=40)	3 (7.5)	0 (0)	3 (7.5)
40-49 (N=42)	7 (16.7)	3 (7.1)	10 (23.8)
50-59 (N=149)	24 (16.1)	20 (13.4)	44 (29.5)
60-69 (N=191)	36 (18.9)	25 (13.1)	61 (31.9)
≥70 (N=198)	73 (36.9)	19 (9.6)	92 (46.5)

Diagnostic Yield of Capsule Endoscopy by Age

CONCLUSION

It was reported that a 33.9% positive yield, with 65.8% of patients undergoing further workup as a result of CE and 12.7% requiring therapeutic intervention. The authors conclude that CE plays an important role in the investigation of IDA and occult gastrointestinal bleeding and has important implications on further management

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