Jejunoileal pattern reversal in celiac disease
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Section: Abdominal imaging
Case Type: Clinical Cases
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Patient: 79 years, male

Clinical History:

A 79 year old gentleman was referred for a small bowel enema for a query recurrence of small bowel lymphoma.

Imaging Findings:

The patient had a long history of celiac disease. He was diagnosed with enteropathy associated T cell lymphoma in over a year ago and had completed three courses of chemotherapy by January 2006. He complained of abdominal pain, similar to his previous pain when he presented with his lymphoma but no associated weight loss or B symptoms. A double contrast small bowel enema was performed to elucidate the possibility of recurrence. This revealed a jejunoileal pattern reversal, with an increased number of ileal folds and a decreased number of jejunal folds. No evidence of a recurrence of small bowel lymphoma was identified.

Discussion:

The best diagnostic clue in the radiological diagnosis of celiac disease is the reversal of the jejunoileal fold pattern on small bowel enema. This reversal of the normal pattern is an adaptive response to decreased jejunal surface. It is a common sign and is present in up to 86% of patients with celiac disease. There is also an increased number of folds in the distal ileum (4-6 per inch) and decreased (<3 per inch) number in the jejunum. The decrease in jejunal folds also result in “colonization of the jejunum” – colon like hastrations of the jejunum. Other radiographic features include fold thickening and small bowel dilatation. It also has been shown that the reversal fold pattern can also be demonstrated in the majority of patient with celiac disease on CT. This particular sign is both sensitive and specific for the diagnosis of celiac disease and can be reliably distinguished from the normal pattern. The presence of this pattern also identifies celiac patients with a poor response to a gluten free diet, who are likely to suffer major complications namely T cell lymphoma and carcinoma of the jejunum. The reversal of jejunoileal fold pattern is the single best feature of diagnostic value for celiac disease (specificity 100%, sensitivity 59%). Combination with other radiological features (e.g fold thickening, small bowel dilatation, increased ileal folds) further increases the accuracy of establishing the diagnosis of celiac disease (specificity 100%, sensitivity 78%).

Differential Diagnosis List: Celiac disease.

Final Diagnosis: Celiac disease.

References:

Barlow JM et al: Celiac disease: how common is jejunoileal fold pattern reversal found at small bowel follow
Figure 1

Description: Origin:
Figure 2

Description: Origin:
Figure 4

Description: Origin: