Multiplelymphomatous Polyposis (a rare type of primary diffuse gastrointestinal non-Hodgkin's lymphoma)

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Abstract

Multiplelymphomatous polyposis (MLP) is a rare form of intestinal mantle cell lymphoma(MCL), few cases were reported in the literature especially female cases. A 58 years old female was thoroughly investigated for her recurrent attacks of bleeding per-rectum associated with anemia, weight loss, low grade fever and mild generalized abdominal pain.

Gastroscopy and colonoscopy showed multiple variable sized polyps at the lower esophageal, gastric, duodenal, and colonic mucosa. Ultrasound, computerized tomography of abdomen and diagnostic laparoscopy were done and revealed multiple bilateral pelvic, para-aortic, mesenteric and cecal lymph node enlargement. Histopathology with immunochemical staining were compatible with diagnosis of mantle cell lymphoma with wide spread gastrointestinal involvement (multiple lymphomatous polyposis). On follow up the patient showed good response to remedies with Rituximab-Cyclophosphamide, Doxorubicin, Vincristine, and Prednisolone (R-CHOP). Involvement of nearly entire gastrointestinal tract by MLP is a rare variety of mantle cell lymphoma, the combination therapy of R-CHOP is encouraging and feasible 18 months after initiation of treatment and follows up.

Keywords: Multiple lymphomatous polyposis, Non-Hodgkin's lymphoma, Mantle cell lymphoma.

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Introduction

The gastrointestinal tract (GIT) is the most commonly encountered localization for extra-nodal non-Hodgkin's lymphomas.[1,2]

Mantle cell lymphoma (MCL) is one of the mature B-cell non-Hodgkin's lymphomas (NHL).[3,4] It comprises 3-10 percent of adult non-Hodgkin's lymphomas in the United States and Europe.[3,5-7] Incidence increases with age. Approximately three-quarters of patients are male and Caucasians are almost twice as frequently affected than blacks [8]. Median age at diagnosis is 68 years.[4] In 1961, Corne's[9] reviewed 22 case reports of multiple lymphomatous polyposis (MLP), and introduced that term as a unique form of malignant GI lymphoma, two decades later, studies revealed that the neoplastic cells of MLP originate from the mantle zone of the lymphoid follicle in most cases, hence these days MLP is a representative intestinal manifestation of MCL[10]. Extra nodal

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involvement of MCL is present in the majority of cases, with a peculiar tendency to invade the gastro-intestinal tract in the form of multiple lymphomatous polyposis.[11] So (MLP) is one of the most common primary gastrointestinal presentations of MCL and accounts for approximately 9% of primary gastrointestinal lymphomas.[12]MLP most commonly occurs in the ascending colon and the small bowel, particularly in the ileum and ileocaecal region. The lesions may appear as ulceration, protrusion or superficial. Occasionally, numerous polyps are present throughout the entire gastrointestinal tract. Polyps may be sessile, pedunculated or both. They range in size from 0.1 to 4–5 cm and may present with ulceration.[11] GI involvement in the ileum, cecum, colon, and rectum were found in (47.6%), (14.3%), (57.1%), and (47.6%), respectively.[13] (MLP) is dominant from the duodenum to the rectum.[13] Research is still being conducted to find an effective treatment for this disease, which is considered as variety of lymphoma with poor prognoses.

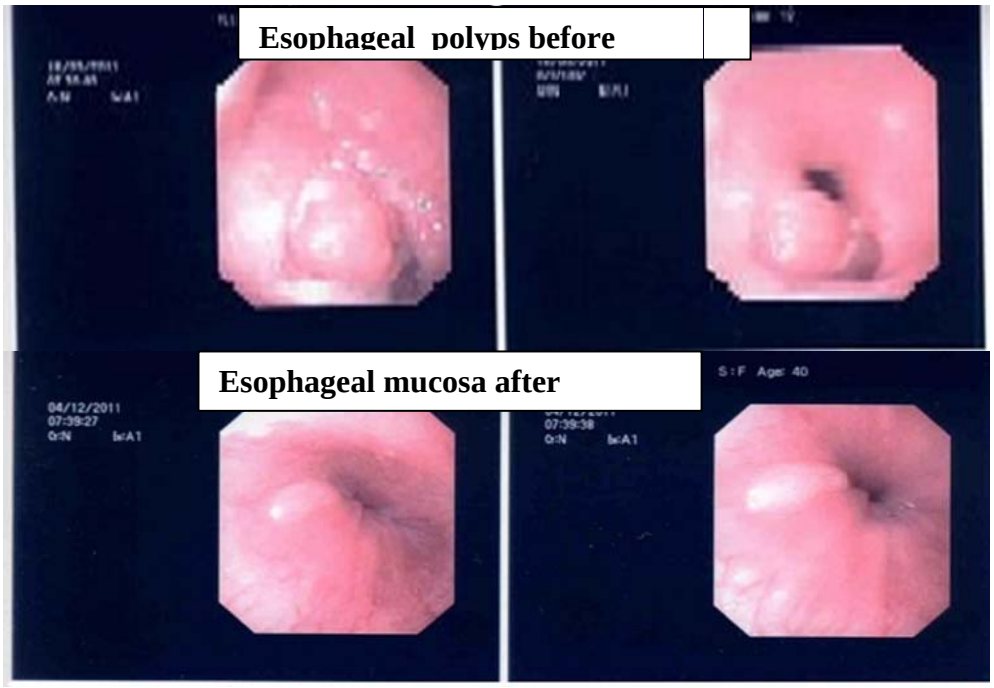


Figure 1. Gastrointestinal tract images before and after treatment

Case Report

A 58 years old female presented with generalize fatigability, lassitude, frequent fainting attacks, right lower abdominal pain, low grade fever, weight loss of about 10 kilograms within the last 6 month and bleeding per-rectum for the last seven months. No previous family history of similar complaint. The patient looked pale, tired with mild right lower abdominal tenderness and tender firm mass felt at the right iliac fossa. No hepatomegaly, splenomegaly or peripheral lymph node enlargement. Blood pressure was 100/60, pulse rate 118/min. digital rectal examination revealed mild blood discharge. No other relevant medical illness other than mild hypertension treated by metoprolol 5o mg/day. Her investigation showed normal hematological counts except hypochromic microcytic red cell morphology, low serum

iron and high iron binding capacity, with no significant increase in the peripheral lymphocytes, normal electrolytes, liver and kidney function tests. Admission to the hospital with supportive therapy and two units of blood were given.

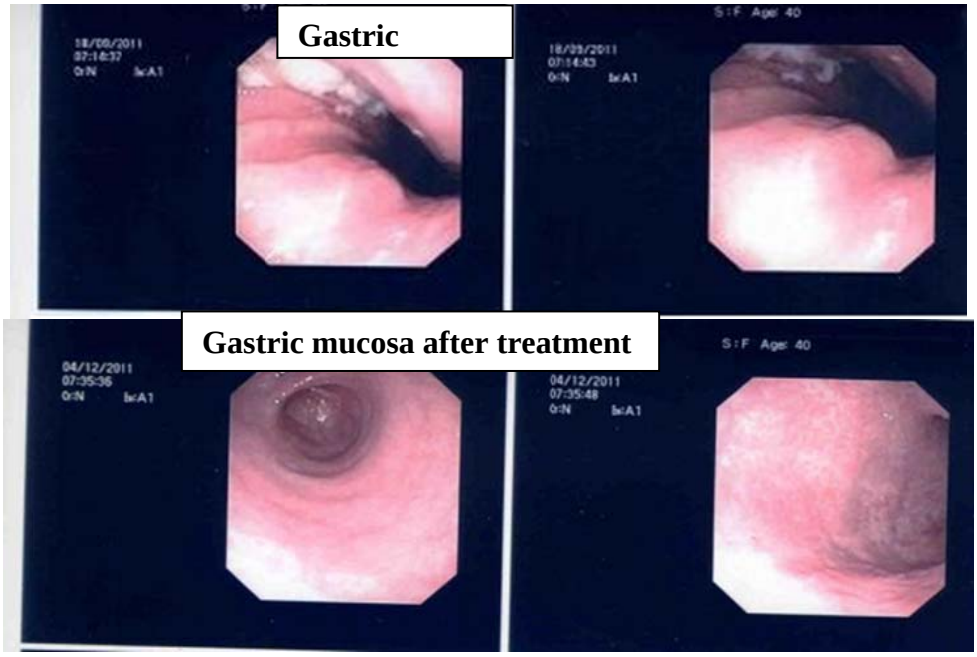
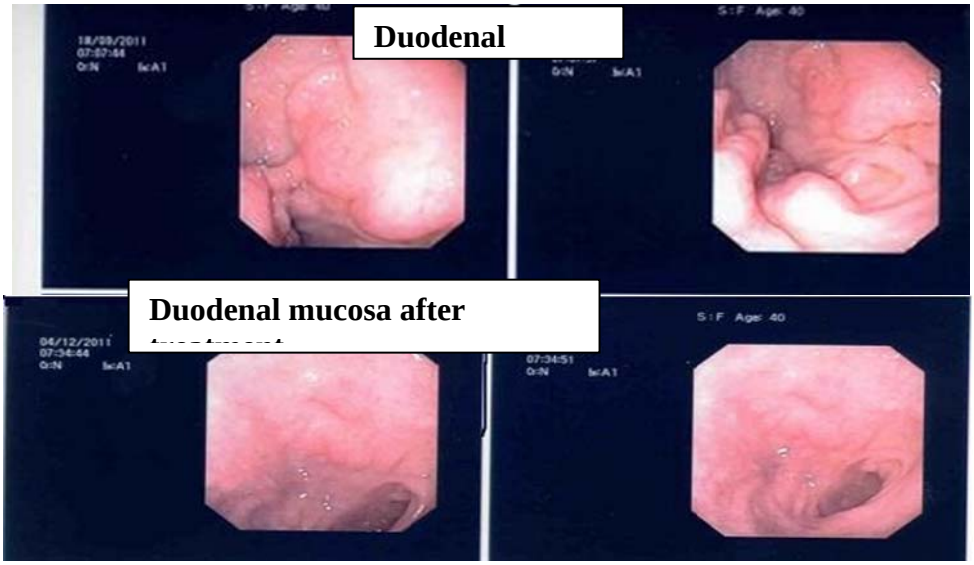


Figure 2



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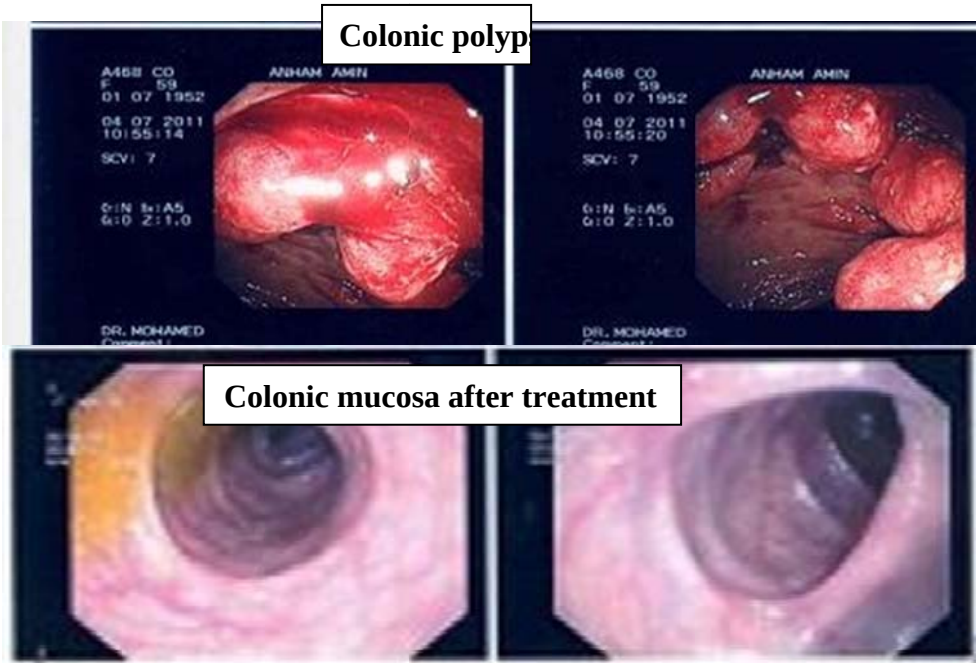

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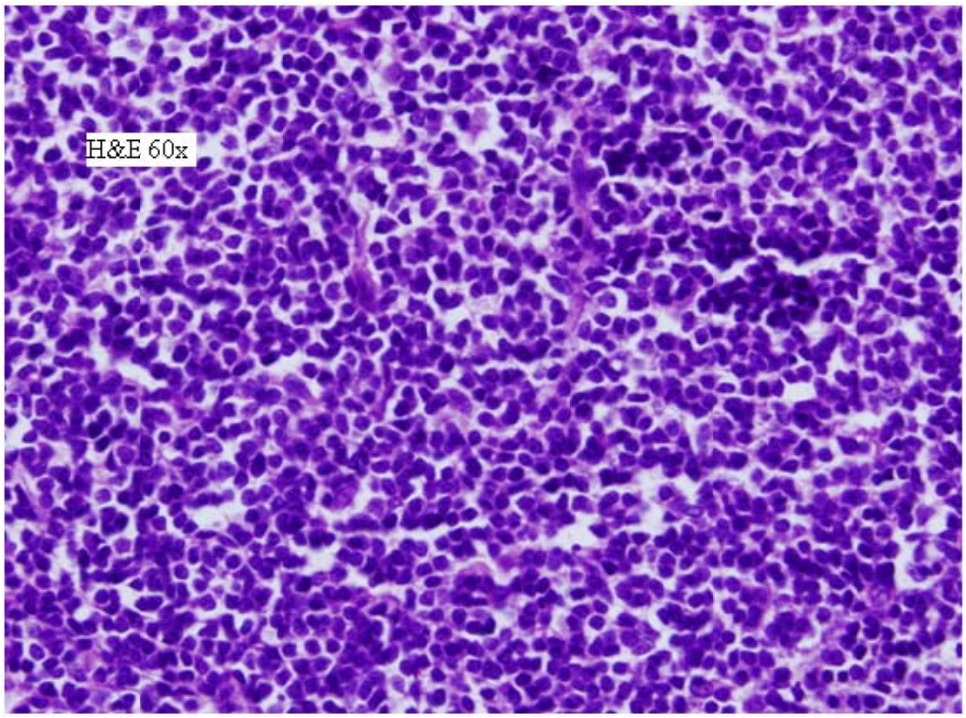

Figure 5

Abdominal ultrasound revealed normal liver and spleen with evidence of multiple different size para-aortic lymph node enlargement with large hypo echoic mass of about 93×73×76mm at the caecal region. **C.T of the abdomen** with contrast showed wide

spread colonic polyposis, large (9cm) caecal solid mass with involvement of the ileum and adjacent mesentery, with multiple pelvic and para-aortic lymph node enlargement and mild ascites.

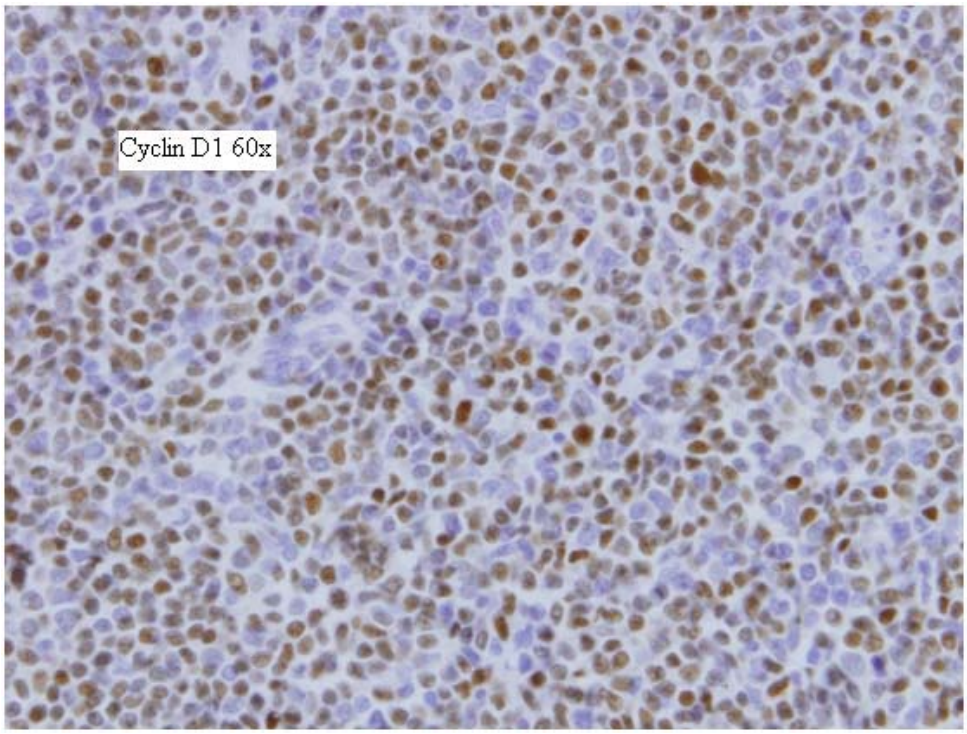

Figure 6

Colonoscopy showed multiple large polyps at the caecum, ascending, transverse, and descending colon till 15 cm above the anal verge with normal terminal ileum (figure 4). Histopathology revealed a severely inflamed mucosa with heavily lymphocytic infiltration, with suspicion of ulcerative colitis in acute phase. **Upper gastrointestinal endoscopy** was conducted and multiple different size polyps were seen at the lower esophageal (figure 1), gastric (figure 2) and duodenal mucosa (figure 3). **Diagnostic laparoscopy** performed and multiple biopsies were taken from large mesenteric, para-aortic and sigmoidal lymph nodes, histopathology demonstrates a monotonous proliferation of small to intermediate sized lymphocytes having a nodular pattern. The cells have irregular nuclear contours and dispersed nuclear chromatin with inconspicuous nucleoli (figure 5). Immunohistochemical study showed a strong reactivity for, cyclin D1 (figure 6),CD20 (figure 7) and CD5. Negative reaction for CD23 and CD10. Unfortunately the patient refuses bone morrow aspiration or biopsy. Treatment with R- CHOP was started. Follow up of the patient for more than two years showed good response on chemotherapy, frequent gastroscopy and colonoscopy revealed disappearance of the gastrointestinal polyps (figures 1,2,3,4).

Discussion

The gastrointestinal tract is the predominant site for appearance of extra-nodal non-Hodgkin's lymphomas. The most frequent

endoscopic finding of mantle cell lymphoma is multiple lymphomatous polyposis. Most of primary gastrointestinal non-Hodgkin's lymphomas (GI NHL) presented with single lesion.[14] MLP is more commonly involved the stomach and small intestine, while esophageal and colorectal lymphomas are relatively rare.[15] In the current case nearly all the GI tract was involved by the disease.

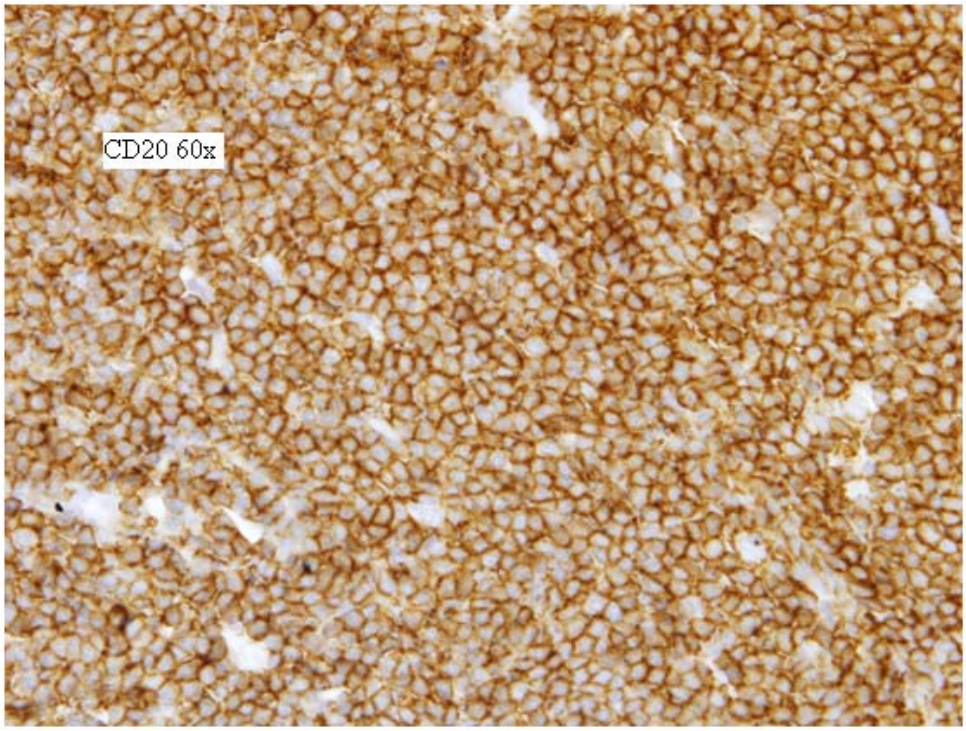

Figure 7

Morton et al,[16] reported that MLP represents only 2% of 175 patients with primary gastrointestinal tract lymphoma. Similarly, Kohno et al,[17] reported that only 4.9% of (143) primary small and large intestinal lymphomas were belonging to MCL. MLP presented with symptoms such as abdominal pain, diarrhea, bleeding, and less frequently, protein-losing enteropathy, intestinal malabsorption, or chylous ascites. Rarely, MLP presents as an acute abdomen due to perforation or intestinal obstruction caused by intussusceptions.[11] Extranodal involvement is found in approximately 90% of cases, including bone marrow, liver and gastrointestinal tract.[18] MLP usually occurs in the ileocecal region and in one third of cases present as a mass.[19,20] Since 1961, no more than (85) well-documented cases have been published.

To my knowledge this is a rare case that involved almost nearly all the gastrointestinal tract with multiple lymphomatous polyps. Ming-Tzung Lin et al,[21] discussed a case of mantle cell lymphoma with massive involvement of the GIT but with no involvement of the esophagus. there were a very limited females cases reported to have MLP, one large study conducted by Masaya

Iwamuro et al,[13] who collected 35 cases of MLP from 21 institutions over 10 years in Japan, only 3 cases were females. As in most cases reported by many authors our case presented with late manifestation of the disease with large polyps especially those seen at the colon with sloughed, ulcerated and bleeding surface. Importantly, MCL is clinically more aggressive and has a shorter median survival, which is 3-5 years.[13]

In mantle cell lymphoma the gastric lesions represents in a different form which appears as a superficial, protruded, fold thickening, or ulcerative lesions. On the other hand, intestinal involvement showed a clear predominance of MLP.[13] Corne's, described gastric lesions as pale folds.[9] Definitive diagnosis of MLP requires histological examination of the specimen with histomorphologic and immunophenotypic analysis. In the current case, histological examination of the colon, mesenteric mass, para-aortic and sigmoidal lymph nodes showed a malignant B-cell non-Hodgkin's lymphoma. The histomorphology and the immunophenotypic analysis with positive CD20 and Cyclin D1confirm mantle cell lymphoma.

Conclusion

GI lymphomatous polyposis is a rare disease especially in females. Esophageal, gastric, and duodenal involvement is rare too. This reported case highlights the mandatory need for careful evaluation of any patient with lymphoma and GI complaint. The prognosis of patients with GI MCL has not yet been thoroughly discussed, but adding Rituximab as targeted monoclonal antibody (Anti-CD20) to standard chemotherapy regimens appears promising.

Abbreviations:
MLP - Multiple lymphomatouspolyposis
GIT - Gastrointestinal tract
MCT - Mantle cell tumor
NHL - Non Hodgkin lymphoma
GI NHL – Gastrointestinal non Hodgkin lymphoma

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الزوائد اللمفاوية المتعددة (نوع نادر من أنواع السرطانات الأولية والشاملة الغير هوجكنيه للغدد اللمفاوية للجهاز الهضمي)

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الملخص

تعد أورام الغدد اللمفاوية (الغير هوجكن) من الأمراض المعروفة بإصابتها للجهاز الهضمي وخاصة المعدة، الأمعاء الدقيقة، الكبد، الطحال، والنخاع العظمي ولكن هنالك حالة نادرة جداً من هذا المرض يمكن أن تصيب الجهاز الهضمي بالكامل بزوائد لحمية لمفاوية واسعة الانتشار وبأحجام وأشكال مختلفة بالإضافة إلى تورم العقد اللمفاوية داخل وخارج الجهاز الهضمي. ومنذ عام 1960 لم يكتشف من هذه الحالات إلا بحدود 85 حالة.

مريضة عمرها 58 سنة تعاني من وهن عام وفقر دم مع نوبات نزف دموي شرجي بين فترة وأخرى ونزول في الوزن. أجري لها فحص السونار، المفراس، ناضور الجهاز الهضمي العلوي والسفلي وناضور جوف البطن الاستكشافي تبين بعد أخذ عينات من زوائد لحمية في معظم أجزاء الجهاز الهضمي ومن العقد اللمفاوية حول المستقيم والشريان الأبهر والمساريق وإجراء الفحص النسيجي باستعمال الصبغة المناعية الخاصة بأن المريضة تعاني من ورم الغدد اللمفاوية من النوع النادر والذي يسمى ورم الزوائد اللمفاوية المتعدد. والذي نادرا جدا ما يصيب الإناث. بعد البدء بالعلاج الكيماوي وإضافة عقار الريتوكسيماب إلى العلاج الثلاثي شوهد تحسن ملحوظ في حالة المريضة عند متابعتها لاحقاً.

الكلمات الدالة: الزوائد اللمفاوية المتعددة، أورام الغدد اللمفاوية (الغير هوجكن).