

Case Report

Open Access

Mucosa associated lymphoid tissue lymphoma of the colon: a case report

Cem Gezen¹, Metin Kement*¹, Mustafa Oncel¹, Erhan Tuncay¹,
Taflan Sahlepçi² and Serdar Alkan¹

Address: ¹Department of Surgery, Kartal Education and Research Hospital, Istanbul, Turkey and ²Department of Oncology, Kartal Education and Research Hospital Istanbul, Turkey

Email: Cem Gezen - cemgezen@hotmail.com; Metin Kement* - mkement@yahoo.com; Mustafa Oncel - mustafaoncel@yahoo.com; Erhan Tuncay - etuncay@yahoo.com; Taflan Sahlepçi - sahlepci@hotmail.com; Serdar Alkan - alkans@hotmail.com

* Corresponding author

Published: 14 December 2009

Received: 6 November 2009

Cases Journal 2009, 2:9316 doi:10.1186/1757-1626-2-9316

Accepted: 14 December 2009

This article is available from: <http://www.casesjournal.com/content/2/1/9316>

© 2009 Gezen et al; licensee BioMed Central Ltd.

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/2.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract

A 65-year-old man had suffered from rectal bleeding during defecation for a few weeks, admitted to our department. Laboratory findings were normal except a slight elevation in the level of alkaline phosphatase. Multiple polypoid lesions were observed in colonoscopic examination. The histological and immunochemical evaluation showed atypical lymphoid cell proliferation and lymphoepithelial lesions on the colonic mucosa, staining with CD20 (CD20 × 100). After the diagnosis had been confirmed as low grade mucosa associated lymphoid tissue lymphoma. Abdominal computed tomography revealed polypoid lesions throughout the colon and multiple millimetric lymphadenopathies in the mesentery. The patient was treated with a chemotherapy regimen. During the follow-up, colonoscopic examination and blind biopsies were repeated in every 6 months, revealed endoscopically and pathologically normal mucosa each time. The patient is still alive without any recurrence of the disease 36 months after the diagnosis.

Background

Mucosa associated lymphoid tissue (MALT) type lymphoma, first introduced by Isaacson and Wright, is thought to be occurred due to chronic antigenic stimulation triggered by persistent infection and/or autoimmune processes [1-3]. Although extra-gastrointestinal involvement has been rarely reported, MALT type lymphomas are most common in the stomach, followed by small intestine and then colon [4-6].

The therapeutic strategy in the presence of a gastric MALT type lymphoma has been well studied, however due to the rarity of the disease, a commonly accepted treatment regimen has not been established when it is located in the colon [7,8]. In the literature, patients with colonic MALT

type lymphoma have been treated either with chemotherapy or surgically. The decision making between these two therapeutic modalities may be difficult, because no criteria has been established to help the medical staff to choose the right option. In this paper, a 65 year-old male diagnosed with colonic MALT type lymphoma was presented, for whom chemotherapy was indicated since the disease invaded the whole colon including the rectum, and sphincter saving procedures would be very difficult to be performed.

Case presentation

A 65-year-old Turkish man had suffered from rectal bleeding during defecation for a few weeks, admitted to our department. He denied other symptoms or signs includ-

ing pain, weight loss, fatigue or enlargement of lymph nodes. Laboratory findings were normal except a slight elevation in the level of alkaline phosphatase. As further evaluation of the rectal bleeding, colonoscopic examination was performed; and multiple polypoid lesions were observed. However, the appearance of the lesions was not similar to the adenomatous polyps that were seen in patients who had polyposis syndromes. Instead, lesions were in different sizes from millimeters to a few centimeters, connected to each other without any normal mucosa in-between, and occupied the whole colon from cecum to rectum (Figure 1). Multiple biopsies were taken and the histological and immunochemical evaluation showed atypical lymphoid cell proliferation and lymphoepithelial lesions on the colonic mucosa (HE \times 200) (Figure 2 and Figure 3). It was strongly staining with CD20 (CD20 \times 100). After the diagnosis had been confirmed as low grade MALT lymphoma, further evaluation was indicated for stage assessment. Thorax computerized tomography (CT) was normal, however abdominal CT revealed polypoid lesions throughout the colon and multiple millimetric lymphadenopathies in the mesentery (Figure 4).

Chemotherapy and surgical resection of the colon and rectum were the two therapeutic options. Since a sphincter-saving procedure was difficult to be performed due to the invasion of the tumor to the rectum, the patient was treated with a chemotherapy regimen consist of Cyclophosphamide 750 mg/m² (Endoxan flk, Eczacıbaşı-Baxter Istanbul, Turkey), Epirubicine 50 mg/m² (Farmorubicin fla, Carlo Erba Istanbul, Turkey), Vincristine 1.4 mg/m² (Vincristine flk., Atafarm, Istanbul, Tur-



Figure 1
Colonoscopy showing multiple polypoid lesions, where located closely to each other, had very thick radices and there was almost no normal mucosa placed in-between.

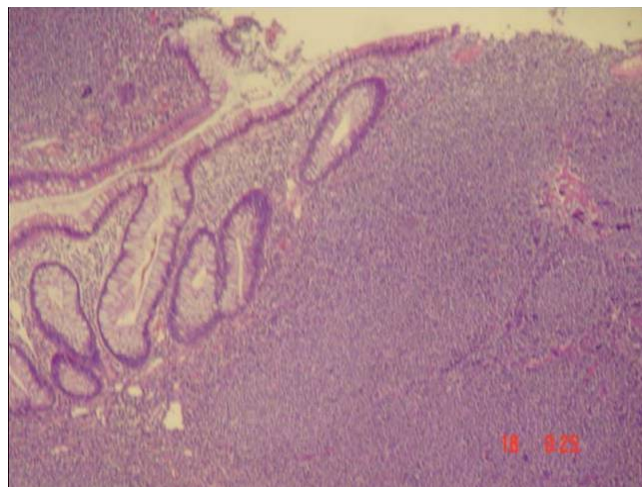


Figure 2
Atypical cell proliferation in the biopsy specimens (HE \times 200).

key), and Prednisone 60 mg/m² (Deltacortil tb. Pfizer, Istanbul, Turkey) for 5 days in every 21 days (CHOP regimen). The regimen was continued for 6 courses, each was followed by a waiting interval of 15 days. After the therapy had been completed, a colonoscopy was performed, which was normal. In addition, the mucosa was biopsied in every 10 cm, and the pathological examination revealed the complete response of the disease to the therapy. During the follow-up, colonoscopic examination and blind biopsies were repeated in every 6 months, revealed endoscopically and pathologically normal mucosa each time. The patient is still alive without any recurrence of the disease 36 months after the diagnosis.

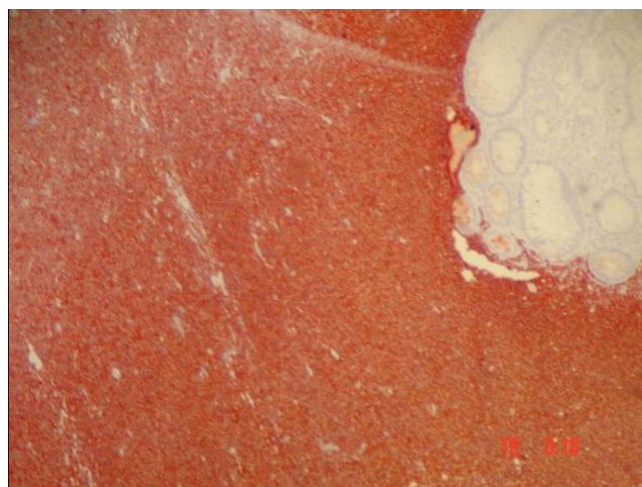


Figure 3
Colonoscopic biopsy; atypical lymphoid cell strongly staining with CD20.



Figure 4
Computerized Tomography: revealed polypoid lesion (black arrow) throughout the colon and multiple millimetric lymphadenopathies (white arrow) in the mesentery.

Discussion

Although the characteristics of gastric MALT lymphomas have been well defined, those arising from the colon are rarely described. It has been reported that only 2.5% of all MALT type lymphomas have been identified as originated from the colon [9]. Due to rarity of the disease the controversy still continues on the diagnosis and therapy of this entity.

Schmid et al advocates that most colonic MALT lymphomas are presented as a single mass and the appearance of the lesion is generally protruding and ulcerative [10]. Contrary to this information, endoscopic examination of the current patient revealed multiple polypoid lesions located in all segments of the colon. The lesions were located closely to each other, had very thick radices, and there was almost no normal mucosa placed in-between. This characteristic configuration can easily make one to recognize the difference between these lesions and adenomatous polyps which are observed more often. Lesions were biopsied, and the pathological examination showed atypical lymphoid cell proliferation. Since, immunohistochemical studies are generally necessitated for the accurate diagnosis, the strongly staining of the tissue with CD20 confirmed the diagnosis as low grade MALT lymphoma.

The treatment of colonic MALT lymphoma has been long debated. Because of the rarity of the disease, the data in the literature are controversial and support both surgery and chemotherapy as a first step therapy in patients with colonic MALT lymphoma. Some advocated that surgery

might be the best choice since the the metastatic ability and sensitivity against chemotherapy of colonic MALT lymphoma were not known [11,12]. Similarly, Matsua et al presented another patient, had a colonic MALT lymphoma reluctant to the helicobacter pylori eradication therapy consequently underwent colonic resection [8]. Besides, different regimens of chemotherapies were successfully used for the treatment of colonic MALT lymphoma including mitoxantrone, chlorambucil, and prednisone polychemotherapy [13]. In the presented case, the whole colon was invaded with multiple lesions. Thus a sphincter-saving procedure might be difficult to be done because of the serious invasion of the rectum with the polypoid lesions. So, chemotherapy was chosen as the first step therapy and a possible surgical intervention was reserved as a second line modality only if the lesions would not respond to the chemotherapy. CHOP regimen was given for 6 courses, and consequently, the patient did not require a surgical intervention, since a complete response was observed.

Although no protocols have been established for the follow-up of these patients, the presented case repeated colonoscopies with multiple blinded biopsies were performed in every 10 centimeters after the chemotherapy had finished and once every 6 months in order to determine the compliance of the disease to the medical treatment and to find out a possible early recurrence. Complete response of the disease to the regimen was detected. No recurrence was noticed during the colonoscopic examinations and with the pathological analyses of the tissues obtained from blinded biopsies. After 36 months-long follow-up, the patient is still alive without any recurrence of the disease.

Conclusion

Colonic MALT lymphoma is rare, however may be presented with atypical lesions and even invade the whole colon. In our opinion, chemotherapy may be the first step treatment option especially when the rectum was invaded, since to perform a sphincter-saving would be difficult in these patients. A close follow-up with colonoscopy and blinded biopsies is necessitated even if a complete response is observed.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the journal's Editor-in-Chief.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

CG involved in conception and design, analysis and interpretation of data, drafting the article, MK and MO involved in conception and design, acquisition of data. ET and SA helped in revising the article, TS involved in conception and design. All authors read and approved the final manuscript.

References

1. Raderer M, Pfeffel F, Pohl G, Mannhalter C, Valencak J, Chott A: **Regression of colonic low grade B cell lymphoma of the mucosa associated lymphoid tissue type after eradication of Helicobacter pylori.** *Gut* 2000, **46**:133-135.
2. Isaacson PG, Wright DH: **Malignant lymphoma of mucosa-associated lymphoid tissue. A distinctive type of B-cell lymphoma.** *Cancer* 1983, **52**:1410-1416.
3. Greiner A, Marx A, Heesemann J, Leebmann J, Schmausser B, Muller-Hermelink HK: **Idiotypic identity in a MALT-type lymphoma and B-cells in Helicobacter-pyloric associated chronic gastritis.** *Lab Invest* 1994, **70**:572-578.
4. Mendelson RM, Fermoye S: **Primary gastrointestinal lymphomas: a radiological-pathological review. Part I: Stomach, oesophagus and colon.** *Australas Radiol* 2005, **49**:353-354.
5. Radaszkiewicz T, Dragosics B, Bauer P: **Gastrointestinal malignant lymphomas of the mucosa-associated lymphoid tissue: Factors relevant to prognosis.** *Gastroenterology* 1992, **102**:1628-1638.
6. d'Amore F, Brincker H, Grønbaek K, Thorling K, Pedersen M, Jensen MK, Andersen E, Pedersen NT, Mortensen LS: **Non-Hodgkin's lymphoma of the gastrointestinal tract: a population-based analysis of incidence, geographic distribution, clinicopathologic presentation features and prognosis. Danish Lymphoma study group.** *J Clin Oncol* 1994, **12**:1673-1684.
7. Nakamura S, Matsumoto T, Nakamura S, Jo Y, Fujisawa K, Suekane H, Yao T, Tsuneyoshi M, Iida M: **Chromosomal translocation t(11;18)(q21;q21) in gastrointestinal mucosa associated lymphoid tissue lymphoma.** *J Clin Pathol* 2003, **56**:36-38.
8. Matsuo S, Mizuta Y, Hayashi T, Susumu S, Tsutsumi R, Azuma T, Yamaguchi S: **Mucosa-associated lymphoid tissue lymphoma of the transverse colon: a case report.** *World J Gastroenterol* 2006, **14**:5573-5576.
9. Hahn JS, Kim YS, Lee YC, Yang WI, Lee SY, Suh CO: **Eleven-year experience of low grade lymphoma in Korea (based on REAL classification).** *Yonsei Med J* 2003, **44**:757-770.
10. Schmid C, Vazquez JJ, Diss TC, Isaacson PG: **Primary B-cell mucosa associated lymphoid tissue lymphoma presenting as a solitary colorectal polyp.** *Histopathology* 1994, **24**:357-362.
11. Takada M, Ichihara T, Fukumoto S, Nomura H, Kuroda Y: **Laparoscopy-assisted colon resection for mucosa-associated lymphoid tissue (MALT) lymphoma in the cecum.** *Hepatogastroenterology* 2003, **50**:1003-1005.
12. Auner HW, Beham-Schmid C, Lindner G, Fickert P, Linkesch W, Sill H: **Successful nonsurgical treatment of primary mucosa-associated lymphoid tissue lymphoma of colon presenting with multiple polypoid lesions.** *Am J Gastroenterol* 2000, **95**:2387-2389.
13. Sallach S, Schmidt T, Pehl C, Gallenberger S, Keiditsch E, Starostik P, Ott G, Schepp W: **Primary low-grade B cell non-Hodgkin's lymphoma of MALT type simultaneously arising in the colon and in the lung: report of a case.** *Dis Colon Rectum* 2001, **44**:448-452.

Publish with **BioMed Central** and every scientist can read your work free of charge

"BioMed Central will be the most significant development for disseminating the results of biomedical research in our lifetime."

Sir Paul Nurse, Cancer Research UK

Your research papers will be:

- available free of charge to the entire biomedical community
- peer reviewed and published immediately upon acceptance
- cited in PubMed and archived on PubMed Central
- yours — you keep the copyright

Submit your manuscript here:
http://www.biomedcentral.com/info/publishing_adv.asp

