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CASE REPORT PEER REVIEWED | OPEN ACCESS

Primary follicular lymphoma of the colon presenting as an incidental finding on endoscopy

Kylie Rose Everard, Offiong Ikpatt, Amrah Pirzada

ABSTRACT

We present a previously healthy 63-year-old female with incidental polyps in the colon that were detected during a surveillance endoscopy. Clinical examination and imaging studies did not detect any lymphadenopathy or organomegaly. Histopathologic evaluation of polyps revealed a low-grade follicular lymphoma. We suggest that follicular lymphoma should be considered as a differential diagnosis of polypoid lesions of the colon.

Keywords: Colon, Follicular lymphoma, Primary

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Kylie Rose Everard[1], Offiong Ikpatt[2], Amrah Pirzada[3]

Affiliations: [1]PGY3 in Anatomical Pathology, Department of Laboratory Medicine, Memorial University of Newfoundland, 300 Prince Philip Drive, St. John's, NL A1B 3V6, Canada; [2]Hematopathologist, Department of Laboratory Medicine, Memorial University of Newfoundland, 300 Prince Philip Drive, St. John's, NL A1B 3V6, Canada; [3]Anatomical Pathologist, Department of Laboratory Medicine, Memorial University of Newfoundland, 300 Prince Philip Drive, St. John's, NL A1B 3V6, Canada.

Corresponding Author: Kylie Rose Everard, PGY3 in Anatomical Pathology, Department of Laboratory Medicine, Memorial University of Newfoundland, 300 Prince Philip Drive, St. John's, NL A1B 3V6, Canada; Email: kre472@mun.ca

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INTRODUCTION

Extra-nodal non-Hodgkin lymphoma involving the gastrointestinal tract accounts for 5–20% of all non-Hodgkin lymphoma. The most common sites include stomach and small intestine. Non-Hodgkin lymphoma of the gastrointestinal tract often consists of marginal zone lymphoma, small lymphocytic lymphoma, mantle cell lymphoma, or diffuse large B cell lymphoma. Common presentations of lymphoma in the gastrointestinal tract include mucosal erosions or ulcerations, nodularities, and polypoid masses [1–3]. Primary follicular lymphoma involving the gastrointestinal tract is infrequent. Primary follicular lymphoma involving the colon is particularly rare [4, 5].

CASE REPORT

The patient was a previously healthy 63-year-old Caucasian female being followed with colonoscopy every two years for history of polyps and a family history of colorectal cancer. A surveillance colonoscopy in May 2022 showed five polyps that were subsequently excised and sent for histopathological assessment.

Leading to the most recent colonoscopy, there were no gastrointestinal complaints, lymphadenopathy, or organomegaly. Laboratory findings include Hb 13.7 g/dL, normal serum ferritin level of 70, and normal blood levels of creatinine, calcium, and lactate dehydrogenase (LDH). Serology indicated a non-reactive status of hepatitis B, hepatitis C, and human immunodeficiency virus (HIV).

Two of the polyps, located at the hepatic flexure and descending colon, showed a polypoid lesion with normal colonic mucosa and submucosal lymphoid infiltrates demonstrating a vague nodularity. The atypical lymphocytes had "centrocyte" features and centroblasts were identified, although rare (Figure 1). By immunohistochemistry, the vague nodularity is accentuated by the CD20-positive B cells and CD23-stained nodular dendritic network. Neoplastic cells were

positive for CD20, CD10 (weak), BCL6, and BCL2 (Figure 2A–D). Background CD3- and CD5-positive T cells were identified. In addition, follicular dendritic meshwork was highlighted by CD23, while Cyclin D1 was negative (Figure 2E and F). The Ki-67 proliferative index was 10%. There was no evidence of large cell transformation. Fluorescence in situ hybridization (FISH) studies indicated the presence of t(14;18) translocation. A positron emission tomography (PET) scan showed no concerning sites of fluorodeoxyglucose (FDG) activity. Given the absence of any other lymphadenopathy, a diagnosis of primary classic follicular lymphoma (FL) involving the colon was made.

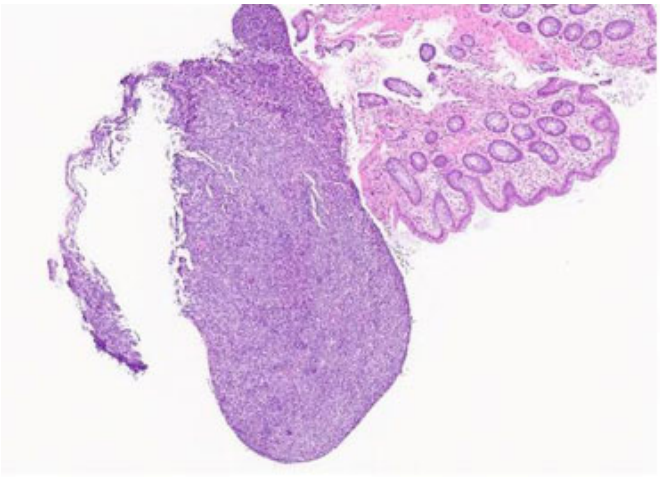

Figure 1: Hematoxylin and eosin (4×) shows an unremarkable colonic mucosa and polypoid submucosal lymphoid infiltrate of small atypical lymphocytes with no increased large lymphoid cells.

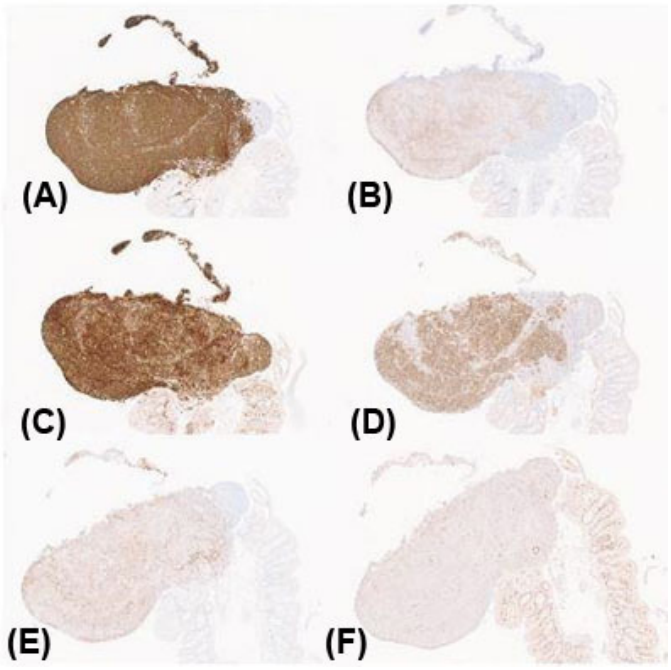

Figure 2: By immunohistochemistry, neoplastic cells stain positive for CD20 (A), CD10 (B), BCL6 (C), and BCL2 (D). Follicular dendritic cells are demonstrated by CD23 (E). Cyclin D1 is negative (F).

Following the diagnosis, the patient was assessed in the hematology clinic where she acknowledged a recent 12-pound weight loss, but denied any fever, chills, or night sweats. There was no palpable lymphadenopathy. Complete blood count and electrolyte levels were performed and were within normal limits. A computed tomography (CT) scan was performed and did not reveal any masses or metastatic disease. The patient feels well and is currently on "watch and wait" with no active treatment.

DISCUSSION

Primary follicular lymphomas are relatively uncommon outside of the lymphatic system, with most occurring in the skin, gastrointestinal tract, or soft tissues. Most gastrointestinal follicular lymphomas occur in the small intestine, which is thought to be related to the abundance of lymphoid follicles [1–3]. Follicular lymphoma of the colon is rare, with a frequency of 1–2% [4–6]. It is slow growing and found in older adults, with no gender differences in incidence.

We add to the limited literature a case of primary follicular lymphoma involving the colon which presented as an incidental finding during endoscopy.

Usually, a suspicion of colonic lymphoma is made when there is an incidental finding during endoscopy, as in our patient. The gross pathology and endoscopic appearance are not sufficient to establish a definitive diagnosis, which requires histopathologic and immunohistochemical investigations [6, 7]. The differential diagnosis of a polypoid nodule in the gastrointestinal tract is broad, ranging from adenomatous to hyperplastic polyps, to reactive lymphoid hyperplasia or lymphoma. As treatment strategies and prognosis are different, accurate diagnosis is crucial [7–9].

As follicular lymphoma arises from germinal center B cells, a follicular growth pattern, and expression of germinal center markers CD10; and BCL6 is observed. Given the histologic description of a diffuse lymphoid infiltrate, reactive hyperplasia, marginal zone lymphoma, and mantle cell lymphoma should also be considered. The positive expression of BCL2 within the germinal centers helps to distinguish follicular lymphoma from a reactive follicular hyperplasia. Interestingly, lymphoma cells in primary gastrointestinal follicular lymphomas express a mucosal homing receptor, α4 β7 integrin. This antigen is negative in systemic follicular lymphomas [10, 11]. Mantle cell lymphoma is usually negative for CD10 but does express CD5, cyclin D1, and sox11. Marginal zone lymphomas usually lack CD5 and CD10 expression. Given the broad differential for a polypoid nodule of the gastrointestinal tract, we stress the importance of correlation with clinical history, imaging studies, genetic assessments, and pathology [12].

Due to its indolence, follicular lymphoma is considered to be more of a chronic disease which rarely progresses to

large B cell lymphoma. Asymptomatic patients may only require observation [1, 2]. Though rare, primary follicular lymphoma should be considered in the differential diagnosis of incidental colonic polyps.

CONCLUSION

To conclude, the differential diagnosis of a benign-appearing colonic polyp is broad, and lymphoma should be a consideration by the pathologist. While rare, primary follicular lymphoma may present in the colon on routine colonoscopy, therefore appropriate immunohistochemical workup should be performed on any lymphomatoid nodule identified in the colon.

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Author Contributions

Kylie Rose Everard – Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Offiong Ikpatt – Conception of the work, Design of the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Amrah Pirzada – Conception of the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Guarantor of Submission

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Consent Statement

Written informed consent was obtained from the patient for publication of this article.

Conflict of Interest

Authors declare no conflict of interest.

Data Availability

All relevant data are within the paper and its Supporting Information files.