CASE REPORT

Delayed diagnosis of a high-grade B-cell non-Hodgkin's lymphoma presenting as an obstructing rectal mass

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Accepted 8 December 2015

SUMMARY

This case describes a 54-year-old man who presented to the surgical triage unit and was found to have a rare underlying rectal lymphoma. The patient had previously sought medical advice on multiple occasions, reporting a chronic inability to open his bowels. This case report aims to highlight the importance of thorough history taking and examination, in order to reduce delaying the diagnosis of significant pathology.

BACKGROUND

Lymphoma is the 11th most common cause of cancer death in the UK, with a rising incidence. There can be extranodal manifestations (34% of cases), which most commonly affect the gastrointestinal (GI) tract, usually the stomach.^{1 2} Colorectal involvement is more rare, seen in only 15–20% of cases.¹ This report is educational not only due to the rarity of the underlying condition, but also because it reinforces the importance of being clinically thorough. A patient presenting with a long history of no bowel motions requires a full abdominal examination, including a digital rectal examination (DRE). A DRE was performed at neither the general practitioner (GP), nor at the accident & emergency (A&E) department on previous visits, resulting in a delay of both diagnosis and subsequent treatment.

CASE PRESENTATION

A 54-year-old man of Pakistani origin presented to A&E with a 10-week history of no bowel motions. He described worsening abdominal pain over weeks, with radiation to the back. He also had a 12 h history of anuria.

His medical history included type II diabetes mellitus and chronic constipation, the latter requiring one A&E admission and multiple GP visits. There was no significant family history. Regular medications included the following:

- ▶ Metformin 1000 mg three times a day
- ▶ Sitagliptin 50 mg two times a day
- ▶ Glimepiride 6 mg once a day
- ▶ Lactulose 20 mL two times a day
- ▶ Atorvastatin 10 mg once a day
- ▶ Ramipril 1.25 mg once a day
- ▶ Paracetamol 1 g four times a day

While in A&E, he was noted to be afebrile with stable observations. His abdomen was soft and non-tender, and his chest was clear with normal heart sounds. Initial management involved catheterisation, laxatives and multiple enemas. He was still

unable to open his bowels and was therefore referred for a surgical opinion.

Once transferred to surgical triage unit (STU), further questioning revealed episodes of loose stool and fresh per rectal (PR) bleeding on defaecation. On reviewing the patient's medical records, there was never any documentation of a DRE. PR examination was performed for the first time on STU. This was an extremely painful procedure for the patient. The examination revealed an uneven, craggy surface of the rectum with a small amount of blood and watery diarrhoea. There was immediate concern of a possible low rectal lesion requiring further investigation. To provide symptomatic relief, the patient was started on adequate analgesia along with nasogastric suction and intravenous fluids.

INVESTIGATIONS

Routine laboratory investigations were within normal range apart from a mildly raised C reactive protein of 28.8 mg/L (normal range: <10 mg/L). Abdominal and erect chest X-rays were unremarkable. Urgent thorax/abdomen/pelvis CT and MRI scans ([figure 1](#)) revealed a soft tissue mass in the rectum, likely a neoplasm. Sigmoidoscopy found a malignant stricturing tumour of the rectum. Biopsies were infiltrated by a highly proliferative B-cell lymphoma, diffusely positive with CD20, CD79a, CD10 and BCL6, and a Ki-67 approaching 100%. The biopsy was histologically consistent with a high-grade B-cell non-Hodgkin's lymphoma favouring Burkitt's lymphoma.

DIFFERENTIAL DIAGNOSIS

The symptoms of abdominal pain, change in bowel habit and PR bleeding are considered 'red flags', and require immediate further investigation. Once detailed history taking, abdominal and DRE are complete, clinically indicated investigations include sigmoidoscopy/colonoscopy and CT scanning. Some of the important differential diagnoses include colon cancer, externally compressing tumours, inflammatory bowel disease (IBD), diverticular disease and coeliac disease.

TREATMENT

The case was referred to the regional haematology malignancy diagnostic service for further investigation with fluorescence in situ hybridisation. The patient was to be seen in outpatient clinic to discuss treatment options of surgery alone, or in combination with chemotherapy and radiotherapy.

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To cite: Sudworth O, Hameed A. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2015-213146

Figure 1 MRI scan revealing obstructing rectal mass.

DISCUSSION

Rectal lymphomas account for <1% of all rectal malignancies.³ The incidence of colorectal lymphoma increases with age, most commonly affecting individuals in the fifth to seventh decades. It is more common in men than in women (1.5:1).⁴ The majority of colorectal lymphomas are found in the caecum and ascending colon. The descending and rectosigmoid colon account for only 25% of cases.⁵ Although the exact aetiology of colorectal lymphoma is poorly understood, two associated risk factors have been reported: IBD and immunosuppression (post-transplant, AIDS, or immune disorder).^{6,7}

The common presenting clinical features of rectal lymphomas are abdominal pain (62%), weight loss (43%) and lower GI bleeding (20%).⁸ Obstruction, as seen in this case, is a relatively rare presentation when comparing to colorectal adenocarcinomas. This is possibly due to the absence of desmoplastic response, resulting in an increased pliable nature of the lymphomas.⁵ Abdominal CT and biopsies attained during endoscopy are the most useful investigations.

Dawson *et al* (1961) described the original criteria for primary GI lymphoma as that occurring in the GI tract, with the following four criteria:

1. Absence of clinically enlarged lymph nodes on physical examination;
2. Absence of enlarged mediastinal lymph nodes on chest radiograph;
3. Normal haematological laboratory values and bone marrow biopsy;
4. Normal appearing liver and spleen.⁹

The WHO classifies subtypes of lymphomas into diffuse large B-cell lymphoma, extranodal marginal zone lymphoma or mucosa-associated lymphoid tissue (MALT), mantle cell lymphoma, Burkitt's lymphoma and follicular lymphoma.¹⁰ The most common histological subtype affecting the GI tract is diffuse large B-cell lymphoma. This is the most aggressive form and is composed of rapidly proliferating cells of B-cell origin. The second most common is a low-grade MALT B-cell lymphoma. These are low-grade tumours arising from B cells associated with mucosal immunity.¹¹ The mural invasion of primary colorectal lymphomas have generally been found to be deeper than secondary lesions.¹¹ Colorectal lymphomas commonly cause

wall thickening, with some authors citing a distance of 7–12 cm between the lumen and the serosa.¹²

Patients with primary colorectal lymphoma may undergo resection, but the value of surgery remains debateable. Owing to the low incidence of the disease, there are no controlled randomised trials to date. The majority of patients are treated either with chemotherapy alone, or through multimodal approaches combining surgery, chemotherapy and radiotherapy.^{6,7}

It is important to re-emphasise that this patient presented similarly on multiple occasions to both GP and A&E, however, there were no documented PR examinations. There is a growing pressure on A&E relating to the 4 h waiting target,¹³ and although running an efficient service is important, putting patient safety first is paramount. This involves performing a thorough clinical examination on all patients, thereby ensuring that no significant underlying pathology is missed.

Learning points

- Rectal lymphoma is a rare condition that is clinically separate from rectal cancer.
- The importance of good history taking and a thorough examination, including performance of a per rectal assessment when clinically indicated, cannot be overstressed.

Acknowledgements The authors would like to thank Mr Afify, Colorectal Consultant, Royal Oldham Hospital, for providing the opportunity to complete this case report.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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