CASE REPORT

Primary gallbladder lymphoma presenting as a polyp

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SUMMARY

We present an unusual case of a 75-year-old woman, with no significant medical history, presenting with ongoing weight loss and change in bowel habit. Her physical examination and initial blood tests were all normal, and, therefore, radiographic imaging was undertaken. Ultrasound and CT of the abdomen confirmed a gallbladder polyp and a laparoscopic cholecystectomy was subsequently performed. Histological analysis confirmed primary gallbladder lymphoma. This case report is the first to present gallbladder lymphoma presenting as a polyp. The authors discuss the incidence, presentation and management of gallbladder lymphoma.

BACKGROUND

The presentation of gallbladder polyps has become very common, but those that cause symptoms are rare. The link between gallbladder polyp size and symptomatic polyps increasing the risk of malignancy has been well documented. Gallbladder lymphoma presenting as a polyp, however, has not been documented yet.^{1–3} This case illustrates the unique presentation of gallbladder lymphoma as a symptomatic gallbladder polyp, initially with symptoms suggesting colorectal malignancy, and explores the surgical management and histological findings.

CASE PRESENTATION

A 75-year-old woman presented to her general practitioner with a history of general malaise, weight loss and change in bowel habit. There was no evidence from the history of rectal bleeding, night sweats or symptoms of thyroid disease.

On examination, her observations were within normal limits; there was no abnormality on abdominal examination, and no peripheral stigmata of gastrointestinal disease.

INVESTIGATIONS

The patient underwent an urgent outpatient colonoscopy, which was unremarkable. Routine blood tests were also undertaken: all were within normal parameters apart from an alanine aminotransferase of 152 IU/L.

An abdominal ultrasound scan was performed (figure 1) and a 9 mm×15 mm×16 mm soft tissue mass was found to be arising from an otherwise normally thin-walled gallbladder. A CT of the abdomen confirmed the same 15 mm mass, which appeared as a sessile polyp with an irregular border (figure 2).

DIFFERENTIAL DIAGNOSIS

After initial examination and investigations, the differential diagnoses were as follows:

- Gallbladder malignancy;
- Gallbladder polyp (benign adenoma).

TREATMENT

After discussion and review of the investigations in our multidisciplinary team meeting, an elective laparoscopic cholecystectomy for histological biopsy was performed due to the investigations being unable to determine the likely diagnosis for the symptoms and gallbladder polyp finding.

OUTCOME AND FOLLOW-UP

Histopathological analysis of the polyp, including immunohistochemical profiling, confirmed sheets of cells of centrocytic and centroblastic type and many lack a normal mantle of small lymphocytes. In addition, there were follicular infiltrates composed of cells that were CD20, CD3 negative, CD10, bcl-6 positive and bcl-2 positive. CD21 staining showed follicular dendritic cell networks. The histology, therefore, identified the gallbladder polyp/nodule as grades 1 and 2 follicular lymphoma (figure 3).

The gallbladder itself showed histological evidence of cholelithiasis and cholesterosis. An adjacent liver biopsy was also taken and did not show any abnormal liver parenchyma features or malignancy.

Following surgery, the patient initially had a difficult postoperative course when she was re-admitted with sepsis, suspected to be biliary in origin on presentation. On CT scan, a fluid collection was found in the right lobe of the liver (but no confirmed abscess) and a right-sided pleural effusion. The fluid collection was confirmed in the right lobe by ultrasound scan and aspirated under its guidance and a percutaneous drain was inserted. She then made a good recovery and was discharged from hospital for outpatient follow-up.

Although the resection margin of the gallbladder lymphoma was clear of disease, the patient underwent bone marrow sampling and a positron emission tomography scan, neither of which demonstrated disseminated disease. She had no chemotherapy postoperatively.

Six months following her discharge from the hospital, she is well and has been discharged from follow-up from the pancreatobiliary clinic.

DISCUSSION

Gallbladder polyps have a reported prevalence of 4.3–6.9%,¹ and can present as either biliary colic,

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Figure 1 Ultrasound scan of the gallbladder.

incidental findings on abdominal ultrasonography or on pathological examination of routine cholecystectomy specimens. During routine cholecystectomy, it has been reported that gallbladder polyps are found in between 2% and 12% of specimens, likely depending on indication(s) of the operation.^{2 4}

Management of gallbladder polyps is dependant on the whole clinical picture of the patients' presentation. If the patient is asymptomatic and the polyp is less than 10 mm in size, there is no indication for intervention.^{4 5} If the patient is symptomatic (regardless of size), has risk factors for carcinoma (such as family history of gallbladder carcinoma or age over 50 years) or if the polyp is greater than 10 mm and/or rapidly increasing in size, a cholecystectomy is indicated due to the risk of malignancy.⁵

The majority of gallbladder polyps are benign, with an estimated 3–8% being malignant.⁶ Over 98% of these malignant tumours are adenocarcinomas, with 0.1–0.2% being lymphomas.³ Polyps which are symptomatic, growing rapidly in size,

sessile or with a wide base or greater than 10 mm in size are increasingly likely to be malignant. A gallbladder polyp in patients over the age of 50 years is also more likely to be malignant than benign.^{2 4 5 7}

Our case is the third one reported of a primary follicular lymphoma of the gallbladder but the only report noted presenting as a polyp.⁸ The other published reports of gallbladder follicular lymphoma were also in women aged between 60 and 80 years. The combination of this patient's age and the size and solitary nature of the polyp raised suspicion of malignancy. Of note, most cases of primary lymphomas of the gallbladder have been diagnosed after surgery by histopathological examination.^{9 10} Owing to the risk of transformation of benign gallbladder polyps into carcinoma, early detection and appropriate management is important for long-term survival.¹¹ Gallbladder follicular lymphoma can be successfully treated with surgery alone (cholecystectomy) if diagnosed early compared with other malignant lesions of the gallbladder.⁸

Figure 2 Selected images of a CT of the abdomen.

Figure 3 Histology biopsy slides—H&E section showing closely packed irregular follicles within the gallbladder wall, lying deep to the muscle coat. Bcl-2 immunostaining of the same sections demonstrating a strong positive staining of the follicle centres.

Patient's experience

The patient had a very difficult time, after her first referral, trying to establish a diagnosis and get to the cause of her symptoms. Her elective admission for surgery was complicated on discharge when she returned acutely unwell with biliary sepsis and a pleural effusion. Not only did this require further invasive treatment and medical intervention but it also understandably heightened the anxiety of her family.

Now that she has been cured following treatment and discharged from routine follow-up, the patient is very happy and leads a normal quality of life again prior to having any symptoms. The patient is also keen for others to learn about her presentation suggesting colorectal cancer but the final diagnosis being something else, so that from an early stage other differential diagnoses and investigations can be considered.

Learning points

- ▶ Weight loss and change in bowel habit are not always symptoms of colorectal cancer and other intra-abdominal pathologies should be considered.
- ▶ Gallbladder malignancy/lymphoma is an important differential diagnosis if ultrasound or CT shows a gallbladder polyp/abnormality.
- ▶ Elective cholecystectomy for histological analysis is the best way to confirm the diagnosis.
- ▶ Positron emission tomography/bone marrow biopsies help ensure that there is no disseminated disease in gallbladder lymphoma.

Contributors All authors were involved with the care of the patient. All the authors contributed to the conception and design of the article. They were all involved in drafting, revising and editing the content for peer review; and were involved in final approval for submission.

Competing interests None.

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REFERENCES

- 1 Andren-Sandberg A. Diagnosis and management of gallbladder polyps. *N Am J Med Sci* 2012;4:203–11.
- 2 Kwon W, Jang JY, Lee SE, *et al.* Clinicopathologic features of polypoid lesions of the gallbladder and risk factors of gallbladder cancer. *J Korean Med Sci* 2009;24:481–7.
- 3 Ono A, Tanoue S, Yamada Y, *et al.* Primary malignant lymphoma of the gallbladder: a case report and literature review. *Br J Radiology* 2009;82:e15–19.
- 4 Donald G, Sunjaya D, Donahue T, *et al.* Polyp on ultrasound: now what? The association between gallbladder polyps and cancer. *Am Surg* 2013;10:1005–8.
- 5 Sarkut P, Kilicirgay S, Ozer A, *et al.* Gallbladder polyps: factors affecting surgical decision. *World J Gastroenterol* 2013;19:4526–30.
- 6 Marangoni G, Hakeem A, Toogood GJ, *et al.* Treatment and surveillance of polypoid lesions of the gallbladder in the united kingdom. *HPB* 2012;14:435–40.
- 7 Yeh CN, Jan YY, Chao TC, *et al.* Laparoscopic cholecystectomy for polypoid lesions of the gallbladder: a clinicopathologic study. *Surg Laparosc Endosc Percutan Tech* 2001;11:176–81.
- 8 Mani H, Climent F, Colombo L, *et al.* Gall bladder and extrahepatic bile duct lymphomas: clinicopathological observations and biological implications. *Am J Surg Pathol* 2010;34:1277–86.
- 9 Mitropoulos FA, Angelopoulou MK, Siakantaris MP, *et al.* Primary non-Hodgkin's lymphoma of the gall bladder. *Leuk Lymphoma* 2000;40:123–31.
- 10 Kato H, Naganuma T, Iizawa Y, *et al.* Primary non-Hodgkin's lymphoma of the gallbladder diagnosed by laparoscopic cholecystectomy. *J Hepatobiliary Pancreat Surg* 2008;15:659–63.
- 11 Park JY, Hong SP, Kim YJ, *et al.* Long-term follow up of gallbladder polyps. *J Gastroenterol Hepatol* 2009;24:219–22.

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