A LEIOMYOSARCOMA OF THE SMALL BOWELS CAUSING OBSCURE GASTROINTESTINAL BLEEDING DIAGNOSED BY CAPSULE ENDOSCOPY


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INTRODUCTION

Only 1-3% of gastrointestinal (GI) malignancies occur in the small intestine [1]. Leiomyosarcoma of the small intestine is very rare with an estimated incidence of 1.2 cases in a million per year [2]. Both males and females can be affected with a peak incidence in the sixth decade [3]. Jejunum is the most common site of leiomyosarcoma, followed by ileum and duodenum [3]. Unlike other sarcomas, metastasis occurs via both hematogenous and lymphatic routes [3]. The overall rate of metastasis ranges from 24 to 50% with the liver being the most common site involved [3]. Overall survival rate is 10 to 48% [3]. Similar to the other small intestinal tumors, the most common clinical presentation is obscure gastrointestinal bleeding (OGIB). To diagnose a leiomyosarcoma is very difficult using conventional endoscopies. Early diagnosis is essential, as surgical resection might be curative. Here, we report a rare case of jejunal leiomyosarcoma causing OGIB that was diagnosed by wireless capsule endoscopy (CE) after the failure of multiple conventional endoscopies to reveal the diagnosis.

CASE REPORT

An 80-year-old lady presented with recurrent gastrointestinal occult blood loss requiring multiple blood transfusions.

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DISCUSSION

Obscure gastrointestinal bleeding may account for 5% of all cases of GI bleeding [4]. It is difficult to detect the bleeding sites located in the small bowel using radiologic, angiographic, or conventional endoscopic techniques. Push enteroscopy can reach depth between 50 and 100 cm of the upper jejunum or between 15 cm and 160 cm.
beyond the ligament of Trietz [5-6]. The result of enteroscopy to detect the source of OGIB depends on the endoscopist skills. Furthermore, it is usually uncomfortable and painful, requires sedation and analgesia, and has risk of perforation [5-6]. These difficulties to find the source of OGIB have been overcome by the use of capsule endoscopy (CE) which can identify bleeding sites beyond the reach of push enteroscopy [7]. In one study, the diagnostic yield of CE was 55% in the evaluation of OGIB compared to 30% for push enteroscopy [8].

CE has been proven in many studies to be superior to conventional endoscopies, barium examinations and standard CT in making the diagnosis of small bowel lesions causing OGIB [1, 7, 9, 10-12]. Most patients referred for CE had already undergone one or more upper endoscopy and colonoscopy procedure as well as small bowel study [9]. For example, in one recent series of 86 patients with small bowel tumors diagnosed by wireless CE, patients reported 395 previous negative procedures (average of 4.6 per patient) [7]. The patient in this report had four procedures before being diagnosed with small bowel tumor using CE.

In a small series study, CE demonstrated the source of OGIB in 17 of 23 patients (73.9%) [9]. In a prospective study of 32 patients with OGIB, a definitive source of bleeding was diagnosed in 21 patients (66%) [11].

With the use of CE, the incidence of small bowel tumors in OGIB might be higher than expected. In a retrospective review of 320 patients who had CE because of OGIB, the tumor incidence was 7.18% (23/320) [1]. In another retrospective analysis of 562 patients who underwent CE for a variety of indications (mostly bleeding), 50 patients (8.9%) were diagnosed with small bowel tumors [12]. Jejunum was the most common location for small bowel tumors diagnosed by CE (49.4% - 65.2%) [1, 7].

A high percentage of these small bowel tumors that were diagnosed by CE, turned out to be malignant. In one study, 48% of small bowel tumors detected by CE were malignant [12]. In another series of 87 small bowel tumors diagnosed by wireless CE, more than 60% were malignant [7].

In one study, the most common malignant tumors were adenocarcinomas, carcinoids, melanomas, lymphomas, and sarcomas [7]. In another prospective study of 416 CEs data, 27 tumors were identified. Seventeen tumors were malignant, 5 of which were adenocarcinomas, 6 carcinoids, 2 melanoma metastases, 2 gastrointestinal stromal tumors (GIST), 1 colon carcinoma metastasis, and 1 non-Hodgkin’s lymphoma [13]. In a similar study, the types of small bowel tumors diagnosed by CE included adenocarcinomas (16%), carcinoids (20%), GISTs (8%), lymphomas (10%), and the rest were varieties of benign tumors [12]. Leiomyosarcoma of the small bowel is relatively uncommon. With the use of CE, it is presumed that more small bowel leiomyosarcomas could be diagnosed. A Medline search showed very few cases of small bowel leiomyosarcomas that were diagnosed by CE [4, 6, 9, 14]. This report describes another case of small bowel leiomyosarcoma diagnosed by CE. Because of the high risk of metastasis, early diagnosis of small bowel leiomyosarco-
mas is very important as surgical resection might be curative. Since many of small bowel tumors are malignant and can metastasize early, it is rational to early include CE in the workup for OGIB, as earlier detection and treatment of these tumors may improve their prognosis. Some recommend CE as a third step when gastroscopy and colonoscopy fail to identify bleeding site of the gastrointestinal tract [5]. Of course, as with most procedures, CE has its own limitations. These include, but not limited to, capsule retention requiring surgical removal especially in patients with Crohn disease, postoperative changes with blind-ending loop, diverticula, radiation-induced strictures, and tumor obstruction [5, 10, 15]. In rare occasions, the capsule retention can cause symptomatic obstruction and perforation [15]. The sensitivity of CE is not hundred percent. Some tumors of the jejunum were missed by CE and identified by push enteroscopy [5]. In another study, a duodenal tumor was also missed by CE [14].

In summary, leiomyosarcoma is a rare malignant small bowel tumor that can cause OGIB. The use of CE can help in establishing early diagnosis and treatment that might improve prognosis. We recommend early use of capsule endoscopy to establish the diagnosis in patients presenting with obscure gastrointestinal bleeding.

REFERENCES

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