

## Primary non-Hodgkin lymphoma of the cecum: A case report

Mateja Kropivnik, Breda Jamar, Bojana Černelč

*Clinical Institute of Radiology, University Medical Centre, Ljubljana, Slovenia*

---

**Background.** Primary lymphoma of the colon is rare, constituting 0.4 % of primary colonic malignancies and usually involves cecum or rectum. The aim of this paper is to present the role and the importance of double contrast barium enema (DCBE) in the diagnostic process.

**Case report.** A 77 years old male was admitted because of suspected inflammation in the area of total endoprosthesis of the left hip, inserted ten years before. *Listeria monocytogenes* was isolated from the aspirate and the patient treated with antibiotics. Twenty years ago the patient underwent nephrectomy because of hypernephroma of left kidney. At the time of admission he had sideropenic anaemia and he was febrile.

**Conclusion.** The patient underwent many diagnostic procedures: ultrasound (US), computed tomography (CT), double contrast barium enema, which showed a tumour in the cecum, small bowel follow-through and scintigraphy. The diagnosis of primary non-Hodgkin lymphoma was established by histology after biopsy at colonoscopy.

*Key words:* cecal neoplasms – radiography; contrast media; barium; lymphoma, non-hodgkin

---

### Introduction

Malignant lymphomas involve the gastrointestinal tract either as primary neoplasms or as part of disseminated disease. Primary lymphoma of the colon is rare, constituting 0.4 % of all colonic malignancies. Non-Hodgkin lymphoma accounts for almost all colonic lympho-

mas.<sup>1-3</sup> The signs and symptoms of colonic lymphoma are non-specific. The lack of specific symptoms can be the reason for delayed diagnosis.<sup>4</sup> The most common presentation is abdominal pain, with weight loss and changing bowel habits in 60-90 % of patients.<sup>1,5</sup>

A palpable abdominal mass can sometimes be noted on the initial physical examination.<sup>6</sup>

Double-contrast barium enema (DCBE) shows the changes in the large bowel, caused by lymphoma, but there is a broad spectrum of radiological variations: lymphoma is a great mimicker.<sup>7</sup>

Ultrasound (US) is often the first imaging modality used in patients with vague abdomi-

Received 28 February 2002

Accepted 6 March 2002

Correspondence to: Prim. Breda Jamar, M.D., Clinical Institute of Radiology, University Medical Centre, Ljubljana, Slovenia; Phone: +386 1 522-34-14; e-mail: bre-da.jamar@kclj.si

nal symptoms and can detect several patterns of involvement in cases of lymphoma.<sup>8</sup>

Computerised tomography (CT) is invaluable for the staging of the disease and is an essential complementary study to barium examination. It establishes the extent and shape of a lymphoma, demonstrates nodal involvement and possible infiltration of the liver or spleen.<sup>9</sup>

In our case, however, the location, the size and the appearance were determined by DCBE.

### Case report

A 77 years old male was admitted to the hospital at the beginning of August 2001, because of pain in the left hip and high body temperature. Ten years ago he had a total endoprosthesis of the left hip inserted and septic coxitis was suspected. He had had a hypernephroma of the left kidney, treated by nephrectomy, 20 year prior to admission. He was also complaining of vague lower abdominal pain, weakness and a short episode of diarrhoea.

On the admission his body temperature was 38.3 °C, he had sideropenic anaemia (E 3.25, Hb 189, and Fe 4.7) and his SR was 131. There was no palpable peripheral lymph nodes enlargement, abdominal mass or enlargement of liver or spleen.

The patient was treated by antibiotics, a needle aspiration of left hip was done and an orthopaedic surgeon was consulted. Scintigraphy showed a slightly higher activity in the area of left hip and in the right lower quadrant of the abdomen.

*Listeria monocytogenes* was isolated from the aspirate, antibiotics therapy was changed and an underlying disease was suspected.

US showed enlarged mesenterial and retroperitoneal lymph nodes and a bizarre, hyperaemic formation at the lower pole of the right kidney (Figure 1). CT showed normal li-



**Figure 1.** Ultrasound: a solid, hyperemic tumour in right lower quadrant of abdomen.



**Figure 2.** Computerised tomography: a slight mural thickening in the area of ileocecal valve.

ver parenchyma, slightly enlarged spleen, enlarged mesenterial and retroperitoneal lymphatic nodes, enlarged right kidney with parapelvic cysts, but no mass in the abdomen was described (Figure 2). Repeated US on the same day suggested that the tumour was in the area of distal segments of ileum.

At the beginning of September a double contrast barium enema was performed, which showed an approximately 4 × 4 cm large, lobulated, well defined tumour in the area of ileocecal valve (Figure 3). The tumour did not have characteristics of colon carcinoma. A small bowel follow-through was normal.

At colonoscopy an ulcerated, cauliflower mass was found in the cecum and biopsy was performed.



**Figure 3.** Double contrast barium enema: a well defined lobulated tumour in the cecum.

The histopathologic diagnosis was non-Hodgkin, B-cell lymphoma.

### Discussion

Colon is a rare site of gastrointestinal non-Hodgkin lymphoma. Radiologic examination of large bowel and colonoscopy with biopsy are sufficient for definitive diagnosis, but US and/or CT are invaluable for the staging of the disease.<sup>10</sup>

Colonic lymphoma has a variety of different presentations, which are best seen by the use of double contrast barium enema technique.<sup>11</sup> The radiologic changes can be divided into five groups: mucosal nodularity, endo-exoenteric mass, intraluminal mass, mural infiltration and mesenteric invasion.<sup>3</sup> Intraluminal mass is the predominant feature, often lobulated and ranging in size up to 20 cm, mostly situated in the cecum, causing irregular enlargement of the ileocecal valve.

In our case the tumour, as seen on double contrast barium enema, met the criteria of colonic lymphoma as described in literature and it clearly did not have radiological characteristics of colonic carcinoma. At US, enlargement of lymph nodes was found and the tumour was seen, but its location and nature were not defined.

CT is invaluable for the staging in cases of primary colonic lymphomas, for definition of tumour invasion and spread. CT findings of intestinal tumour can throw a suspicion of lymphoma. Cecal tumours which are fairly demarcated from the surrounding pericolic fat and show no evidence of invasion or obstruction of neighbouring viscera are suggestive of lymphoma.<sup>12</sup> In our case lymphoma of cecum was not obvious on CT examination. Because of US findings, which suggested pathology of the right kidney, the colon was not cleansed and there were a lot of faecal residua in the lumen, which made the proper evaluation of colonic disease difficult. Also, the tumour was small, only 4 cm in diameter. Nevertheless, on retrograde evaluation, the area of ileocecal valve showed mural thickening.

### Conclusion

In the era of many imaging modalities, double contrast barium enema remains one of very sensitive, if not specific, diagnostic tools. The exact location and size can be determined and differential diagnoses suggested, even before the definitive diagnosis with biopsy is established.

## References

1. Rubesin SE, Furth EE. Other tumors. In: Gore ME, Levine MS, Laufer I, editors. *Textbook of gastrointestinal radiology*. Philadelphia etc.: Saunders, 1994. p. 1200-7.
2. Cho MJ, Ha CS, Allen PK, Fuller LM, Cabanillas F, Cox JD. Primary non-Hodgkin lymphoma of the large bowel. *Radiology* 1997; **205**: 535-9.
3. O'Connell DJ, Thompson AJ. Lymphoma of the colon: the spectrum of radiologic changes. *Gastrointest Radiol* 1978; **2**: 377-85.
4. Doolabh N, Anthony T, Simmang C, Bieligg S, Lee E, Huber P, et al. Primary colonic lymphoma. *J Surg Oncol* 2000; **4**: 257-62.
5. Zinzani PL, Magagnoli M, Pagliani G, Bendandi M, Gherlinzoni F, Merla E, et al. Primary intestinal lymphoma: clinical and therapeutic features in 32 patients. *Haematologica* 1997; **3**: 305-8.
6. Zigelboim J, Larson MV. Primary colonic lymphoma. Clinical presentation, histopathologic features, and outcome with combination chemotherapy. *J Clin Gastroenterol* 1994; **4**: 291-7.
7. Mendelson RM. The gastrointestinal tract. In: Pettersson H, editor. *A global textbook of radiology*. Lund: The Nicer Institute; 1995. p. 891-1025.
8. Goerg C, Schwerek WB, Goerg K. Gastrointestinal lymphoma: sonographic findings in 54 patients. *Am J Roentgenol* 1990; **4**: 795-8.
9. Herlinger H, Maglinte DDT. Tumors of the small intestine. In: Herlinger H, Maglinte DDT, editors. *Clinical radiology of the small intestine*. Philadelphia etc.: Saunders; 1989. p. 399-451.
10. Montini F, Mascio DE, Fossaceca R, Frino F, Angelucci D, Errichi BM. Primary non-Hodgkin lymphomas of the colon: apropos of a case with double localisation. *Chir Ital* 1994; **46**: 59-65.
11. Torres WT, Gedgudas-McClees RK. Lymphoma. In: Gore RM, Levine MS, Laufer I, editors. *Textbook of gastrointestinal radiology*. Philadelphia etc.: Saunders; 1994. p. 2570-82.
12. Wyatt SH, Fishman EK, Hruban RH, Siegelman SS. CT of primary colonic lymphoma. *Clin Imaging* 1994; **18**: 131-41.