

Ultrasonographic features of a large B-cell lymphoma of the gallbladder

Safra kesesi lenfomasının ultrasonografik özellikleri

To the Editor,

Lymphoma of the gallbladder is very rare (1, 2). There is no adequate knowledge of the findings on ultrasonography, which is the first-step gold standard assessment tool of the gallbladder pathology. The aim of this letter was to describe the ultrasonographic findings of lymphoma involvement of the gallbladder.

A 32-year-old female patient was admitted to our hospital with abdominal pain, bloody diarrhea and weight loss. Renal transplantation had been performed eight years before. Various immunosuppressive drugs had been used. Abdominal ultrasonography demonstrated a diffusely thickened, hypoechoic gallbladder wall (31 mm), but the echogenic inner layer of the wall was preserved with no evidence of gallstones (Figure 1a, b). Thicknesses of the duodenum and right colonic wall were also determined. Upper gastrointestinal endos-

copy revealed a fragile, ulcerated mass in the duodenal bulb. Biopsy specimen from the mass revealed diffuse involvement by a lymphocytic proliferative process with a diffuse cell type of B-cell lineage. The patient was diagnosed with intestinal non-Hodgkin lymphoma and gallbladder involvement. Five days after the initiation of chemotherapy, endoscopically treated bleeding from the duodenal mass and then intestinal perforation occurred. Abdominal ultrasonography demonstrated considerable decrease in the gallbladder wall (to 15 mm) and intestinal wall thickening (Figure 2a, b). In urgent laparotomy, small bowel perforation was observed, and partial resection of the small bowel, distal gastrectomy, cholecystectomy, and appendectomy were carried out. On histological examination, diffuse large B cell lymphoma of the gallbladder, appendix and small bowel were con-

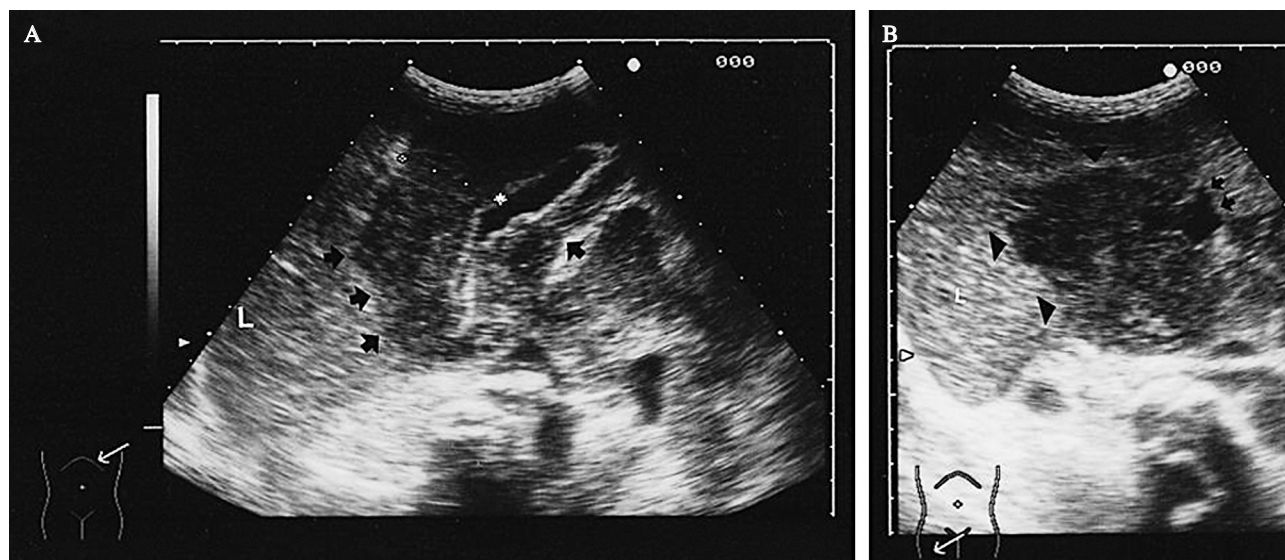


Figure 1. A: Longitudinal section of the gallbladder. Prominent hypoechoic gallbladder wall thickening is seen (arrows). Asterisks (+) indicate the inner surface of the gallbladder. L: Liver. **B:** Transverse sonogram showing asymmetrical gallbladder wall thickening (arrowheads) (arrows: gallbladder lumen).

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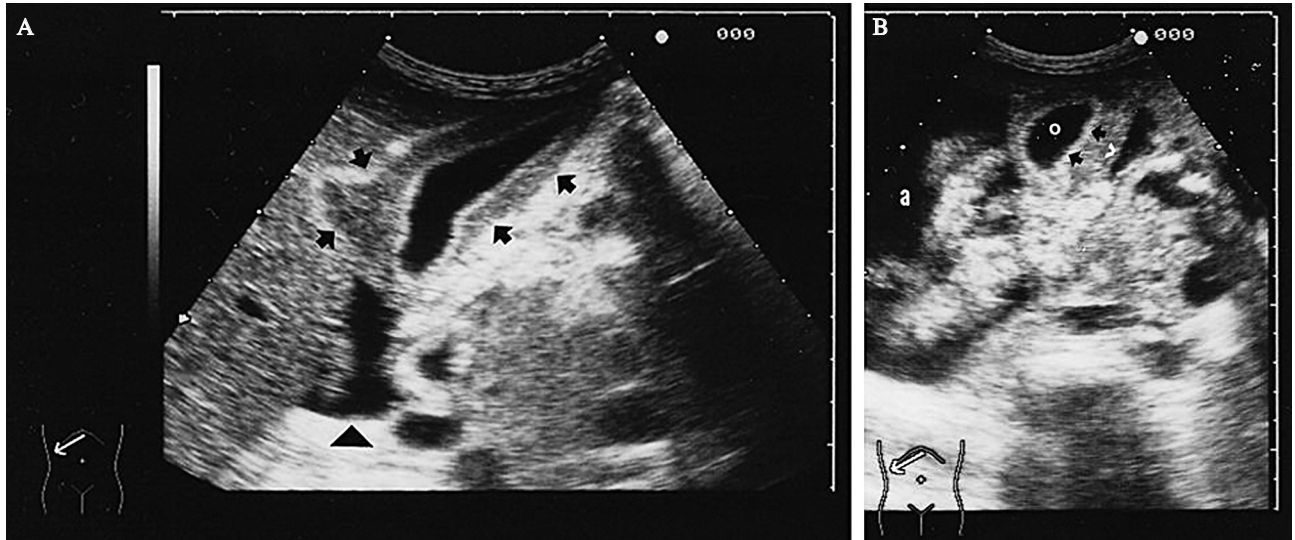


Figure 2. A: After chemotherapy, considerable decrease in the gallbladder wall thickening is seen (arrows). B: Transverse section of the same location. a: Ascites. o: Gallbladder lumen.

firmed. The patient died due to sepsis 10 days later.

As far as we know, only three patients with lymphoma involvement of the gallbladder have been reported. A patient reported by Neal et al. (3) had diffuse gallbladder wall thickening on ultrasound. In the other two patients, ultrasonographic features of the gallbladder involvement were not reported (4, 5).

The most prominent finding in our case was the gallbladder wall thickening, which was diagnosed sonographically when the wall measured greater than 3 mm thick. Gallbladder wall thickening is known to be a nonspecific finding, and might be observed in benign or malignant conditions. Various conditions associated with diffuse wall thickening

include benign diseases such as liver cirrhosis, portal hypertension, acute hepatitis, ascites, acute cholecystitis, heart failure and renal failure, or malignant diseases such as primary or secondary tumors (3, 6). In our case, a thickening of the wall of the gallbladder of 32 mm is usually not caused by inflammation or congestion. Thus, the non-malignant diseases are really not the primary differential diagnosis. In our case, a significant feature considering the lymphoma infiltration was preservation of the echogenic inner layer of the wall. In other malignancies, such as carcinoma, the inner layer of the gallbladder wall is disrupted. In addition, decrease in the thickening of the wall following chemotherapy is a good indicator for the diagnosis of the lymphoma infiltration of the gallbladder.

REFERENCES

1. Albores-Saavedra J. Histological typing of tumours of the gallbladder and extrahepatic bile ducts. WHO international histological classification of tumours. 2nd ed. Heidelberg: Springer-Verlag, 1978: 16.
2. Au E, Ang PT, Tan P, et al. Gastrointestinal lymphoma: a review of 54 patients in Singapore. *Ann Acad Med Singapore* 1997; 26: 758-61.
3. Neal MR, Shah HR, Angtuaca TL. Case of the day. 6. Diagnosis: lymphoma of the gallbladder. *J Ultrasound Med* 1994; 13: 337-8.
4. Gillespie JJ, Ayala AG, MacKay B, et al. Diagnosis of lymphoma from a cholecystectomy specimen: case report and review of the literature. *South Med J* 1977; 70: 353-4.
5. Tartar VM, Balfe DM. Lymphoma in the wall of the bile ducts: radiologic imaging. *Gastrointest Radiol* 1990; 15: 53-7.
6. Sezgin O, Bahar K, Uzunalimoğlu Ö. Gallbladder wall thickening and emptying function in liver cirrhosis. *Turk J Gastroenterol* 1997; 8: 397-401.

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