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A case of intra-abdominal non-hodgkin's lymphoma

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Abstract
Gastrointestinal lymphoma is an uncommon disease but is the most frequently occurring extranodal lymphoma constituting 2–4% of all malignant tumors of the gastrointestinal tract.
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Most common involvement: Stomach > small bowel > large bowel >oesophagus.

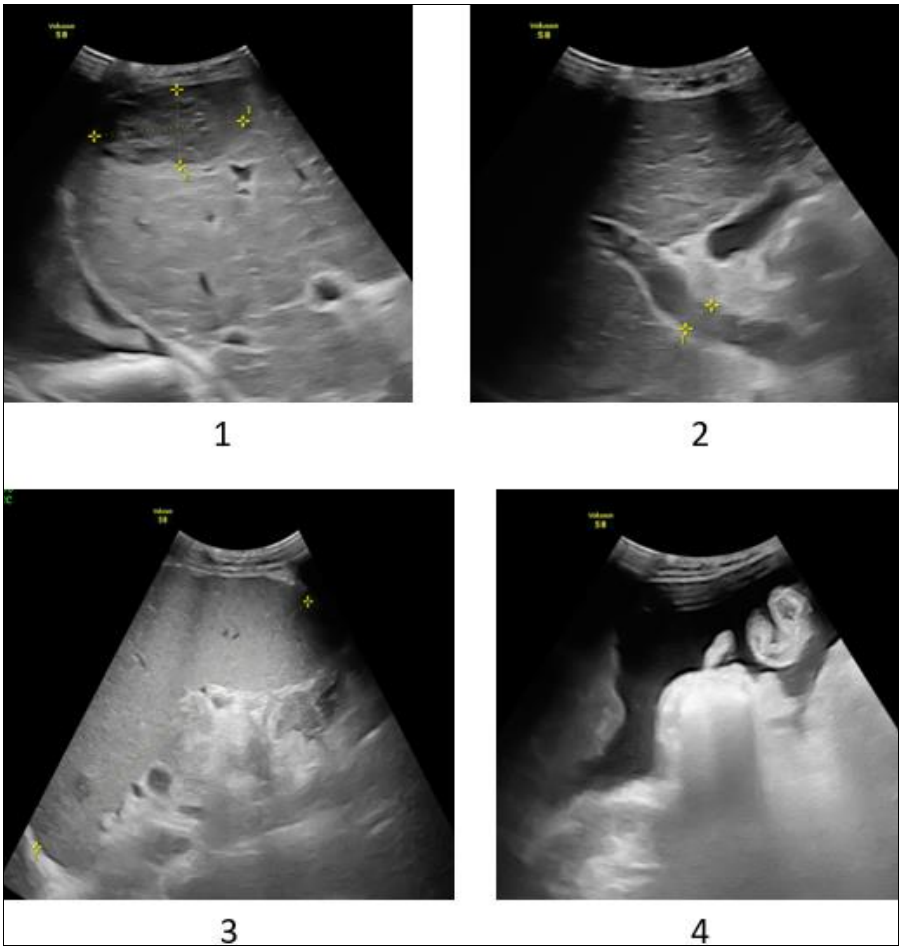
Keywords: Lympho-proliferative disorder, Non-Hodgkins lymphoma

Introduction

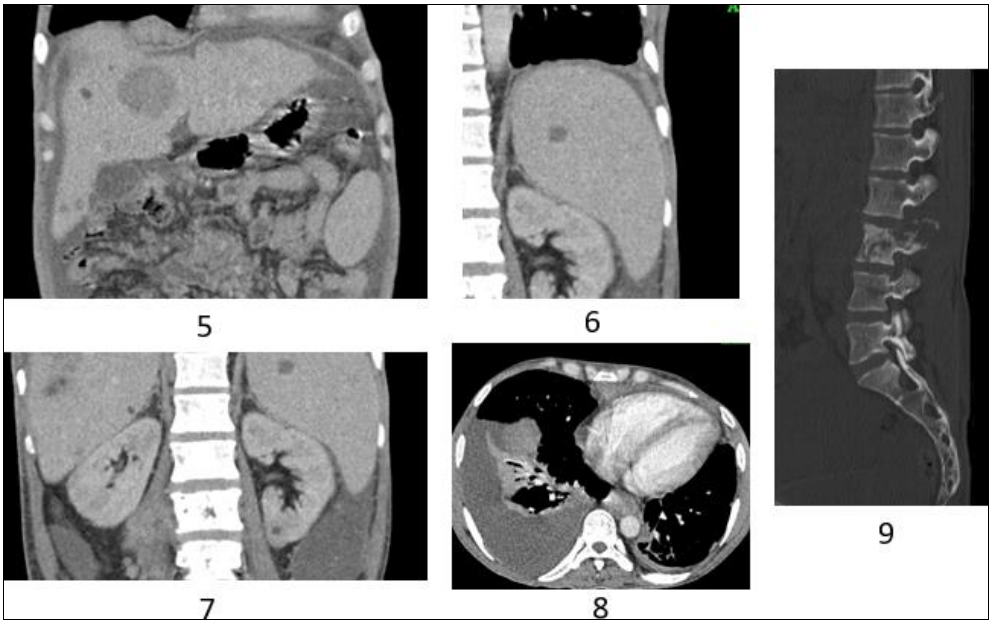
A male patient aged 39 years presented with low backache since 1.5 to 2 years which aggravated since past 15 to 20 days. Low backache was insidious in onset and progressive in nature and was radiating to right thigh, associated with restriction of movement and difficulty to stand up from sitting position.

Materials and methods: A male patient aged 39 years presented with low backache since 1.5 to 2 years which aggravated since past 15 to 20 days was referred to the Department of Radiology for further evaluation. Ultrasonography and contrast enhanced computed tomography and magnetic resonance imaging of abdomen and pelvis were performed and the imaging features were recorded. The imaging features and final diagnosis were documented in a structured case record form.

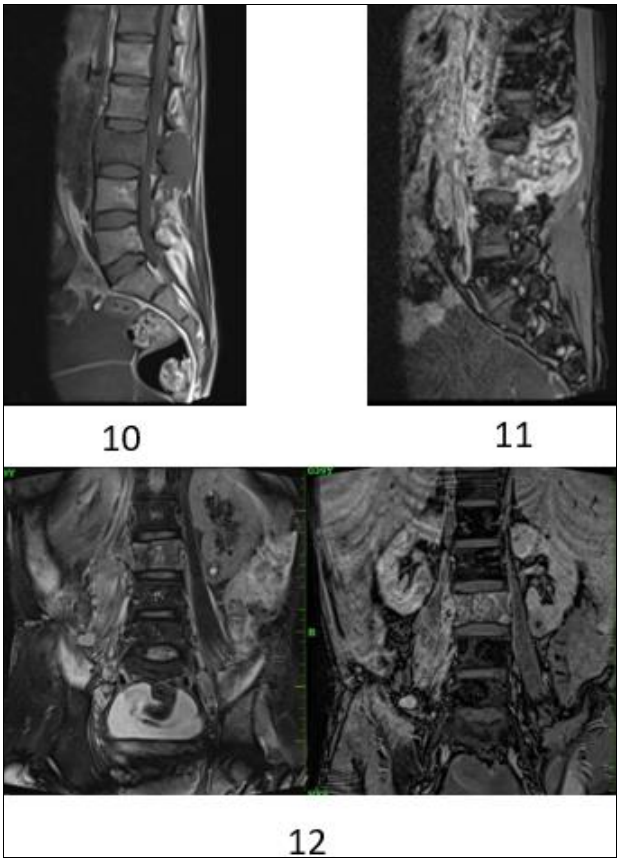
Imaging findings



Ultrasound (USG) showed hepatomegaly with hypoechoic lesions scattered throughout the liver parenchyma (1) with dilated portal vein (2), splenomegaly with a hypoechoic lesion in the upper pole (3) and gross ascites (4).



Contrast enhanced computed tomography (CECT) showed hepatomegaly with multiple hypodense hypo-enhancing lesions (5), splenomegaly with hypo-enhancing nodular lesion (6), well defined small solid cystic lesion in the lower pole region with hypo-enhancing peripheral solid component and non-enhancing cystic component (7), multiple enlarged homogeneously enhancing lymph nodes in the peri-cardiac, para-oesophageal, celiac, peri-pancreatic, pre and para aortic, mesenteric, bilateral common iliac and external iliac stations and left inguinal region, largest measuring ~ 4.6 x 2.6 cm in the peri-cardiac station (8), L3 vertebra is heterogeneous and shows few lytic lesions involving the vertebral body, pedicle and right transverse process (9) and ascites.



Magnetic resonance imaging (MRI) of spine showed soft tissue intensity lesion in the pre-vertebral space displacing the anterior longitudinal ligament anteriorly extending into the right para-vertebral and para-spinal regions at L3 vertebral level which showed enhancement on post contrast images, measuring ~ 4.4 x 5.8 cm (AP x TR) and indenting

the cauda equine nerve roots causing spinal canal narrowing (10 & 11) and visualized extent of abdomen revealed hepatomegaly with multiple T2 hyperintense nodular lesions in both lobes of liver, a well defined solid cystic lesion in the lower pole of left kidney (12), splenomegaly, moderate ascites and enlarged lymph nodes.

Following the imaging findings, the diagnosis of lympho-proliferative disorder was made and the biopsy result was proven as Non-Hodgkins lymphoma.

Discussion

Lymphomas are divided into two major categories:

1. Hodgkin lymphoma (HL)
2. Non-Hodgkin lymphoma (NHL)

Hodgkins	Non-hodgkins
Localized to single axial group of lymph nodes (cervical, mediastinal, para aortic)	Multiple peripheral nodes are involved
Continuous spread	Non-contiguous spread
Mesenteric nodes rarely involved	Mesenteric nodes are commonly involved
Extranodal involvement uncommon	Extra-nodal involvement is common

Hepatic lymphoma is of two types, primary hepatic lymphoma which is rare and secondary hepatic involvement with lymphoma which is more common [1] which appear hypodense on CT [2] and on MRI appear as T1 hypointense, T2 hyperintense to liver and on post contrast shows perilesional enhancement [1].

Splenic lymphoma is also known as lymphomatous involvement of the spleen which is of two types, primary which are rare and secondary which are more common. On ultrasound it appears as small circumscribed nodules or as bulky splenic masses [3] which are hypoechoic. CECT the lesions are hypoenhancing [4] and best seen in late venous phase. The lesions appear hypo to isointense on T1/T2 and may show very mild post contrast enhancement [5].

Secondary involvement of bone with lymphoma is known as secondary bone lymphoma and occurs due to direct spread or hematogeneous metastasis. The axial skeleton is most commonly involved [6]. They appear as lytic lesions with cortical breach on CT and plain radiograph.

Staging [7]

Stage I: Tumor confined to GI tract, single primary site or multiple noncontiguous lesions.

Stage II: Tumor extends into the abdominal cavity from the primary GI site.

II1: Local nodal involvement

II2: Distant nodal involvement.

Stage III: Penetration through serosa to involve adjacent organs or tissues.

Stage IV: Disseminated extranodal involvement or a GI tract lesion with supradiaphragmatic nodal involvement

Conclusion

Extra-nodal lymphoma can mimic any other neoplastic or inflammatory condition. A definitive diagnosis of lymphoma is possible only with the help of biopsy. CT and MRI play an important role in assessing the extent of tumor. The wide spectrum of imaging findings in our case will helps us in aiding the diagnosis of lymphoma.

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