NEWER TECHNIQUE

A Large Mesenteric Pleomorphic Sarcoma: Where to Target a Biopsy?

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ABSTRACT

The present case report shows us an insight into recent medical imaging, new innovations and techniques of abdominal scan acquisition using dual energy. The primary objective was attaining a feasible site for tissue biopsy and secondary objective was proper anatomical delineation of pathology using cinematic VRT images. VNC and mixed images reveal the mesenteric mass and provide a favorable outcome on the biopsy selection site.

Keywords: Biopsy, Cinematic VRT images, Dual energy, Sarcoma.

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HISTORY

A 58-year-old male patient, who has been suffering from chronic liver disease with portal hypertension for the past 12 years, presented himself to the hospital due to abdominal distension for the past month. Hepatocellular carcinoma was suspected, and a twin beam dual energy (TBDE) computed tomography (CT) was ordered for assessment.

DIAGNOSIS

Computed tomography (CT) images revealed a bulky lobulated mesenteric mass in the right hypochondrium-lumbar region, measuring approx. 19 (AP) × 16 (TR) × 20 (CC) cm in size. The mass was heterogeneously enhanced, showing central hypodense areas suggesting necrosis. It infiltrated into segments 5 and 6 of the right liver lobe, displaced and compressed the ascending colon, and abutted the right anterolateral abdominal wall with no signs of inva-

sion. Extensive distribution of hypodense areas featuring moderate ascites was present (Figs 1 and 2).

Iodine uptake of the mass was measured and accordingly, a core needle biopsy was successfully performed in the most enhanced area. The histological result defined a pleomorphic sarcoma.

COMMENTS

Pleomorphic sarcoma of the mesentery is a rare tumor entity and the management of this is significantly different from that of hepatocellular carcinoma.^{1,2} Although tests of AFP and immunohistochemistry could be helpful for differential diagnosis, identification of a target area for biopsy in such a large tumor remains challenging. TBDE CT provides the possibility of quantifying iodine uptake using syngo. CT DE virtual unenhanced. Therefore, the area with a maximum iodine uptake can be measured. This reduces the chance of fetching negative tissue specimens. The reconstructed 3D images are found to be extremely helpful in enabling a clear communication and demonstration to the operating surgeons.

Examination protocol

Scanner	SOMATOM definition AS+
Scan area	Abdomen pelvis
Scan mode	TBDE
Scan length	473 mm
Scan direction	Craniocaudal
Scan time	13 s
Tube voltage	AuSn 120kV
Effective mAs	650 mAs
Dose modulation	CARE dose 4 D
CTDIvol	13.9 mGy
DLP	682 mGy cm
Rotation time	0.5 s
Pitch	0.3
Slice collimation	64 x 0.6 mm
Slice width	1.5 mm
Reconstruction increment	1 mm
Reconstruction kernel	D 3 0 f
Contrast	350 mgI/mL
Volume	100 mL + 40 mL saline
Flow rate	3 mL/s
Start delay	Bolus tracking in the descending aorta @100 HU + 6s

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Figs 1 A to D: Axial (A) Coronal MPR; (C) Cinematic VRT; (B and D): Images depict a bulky lobulated heterogeneously enhanced mesenteric mass in the right hypochondrial-lumbar region. Extensive distribution of hypodense areas featuring moderate ascites was present

Figs 2A and B: (A) Axial VNC; (B) Mixed

Figs 2C and D: (C) Fused images show the mesenteric mass with heterogeneous enhancement; (D) A coronal view of the fused image demonstrates the most enhanced area with a significant iodine uptake of 2.7 mg/mL

REFERENCES

1. Liles JS, Tzeng CW, Short JJ, Kulesza P, Heslin MJ. Retroperitoneal and intra-abdominal sarcoma. Current problems in surgery. 2009;6(46):445-503.
2. "Undifferentiated/unclassified sarcomas," in WHO Classification of Tumours of Soft Tissue and Bones, C. D. M. Fletcher, J. A. Bridge, P. C. W. Hogendoorn, and F. Mertens, Eds., IARC, Lyon, France, 2013.