Hydatid disease with hepatic, osseous and muscular involvement

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Section: Abdominal imaging
Technique: CT
Case Type: Clinical Cases
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Patient: 70 years, female

Clinical History:
Abdominal and back pain.

Imaging Findings:
The patient was referred to the hospital for abdominal and back pain. US and multislice spiral CT were performed and showed multiple hepatic cysts suggesting diagnosis of echinococcosis (Fig. 1, 2). Vertebral and costal involvement were evident at D6-D7 level (Fig. 3, 4).

Discussion:
Echinococcosis, also termed hydatidosis, is a zoonosis caused by Echinococcus (main types: granulosus and multilocularis). The liver, especially the right lobe, is the most frequently involved organ (75%), followed by the lungs (15%). All other localizations account for only 10% of the cases and can usually be related to a rupture of a cyst in the bear area of the liver with consequent disease spreading (as in our case). Adequate evaluation with US, CT and MR is essential to localize hydatidosis lesions. US is widely utilized for hydatid cysts identification. However, in cases of unsuccessful US due to patient conditions (e.g. intestinal gas, obesity, etc) or disease complications (e.g. peritoneal seeding, abdominal wall invasion, portal vein invasion, etc), CT study has to be performed. Moreover, CT easily depicts calcification of the cyst wall or internal septa and allows for optimal evaluation of cyst infection and osseous lesions. Usually, unless complications are suspected, i.v. administration of contrast material is not necessary. MR study is complementary to CT and is reported to be very important to demonstrate neural involvement. Anthelmintic drugs (e.g. albendazole) are used to control the disease; in case of vertebral involvement, the recommended treatment is the radical excision of the vertebra (but recurrence rate is high). In the case described above, the use of a multislice CT scanner provided higher spatial resolution than conventional or single slice spiral CT equipments and subsequent image elaboration on a dedicated off-line workstation yielded excellent depiction of all hydatid lesions.

Differential Diagnosis List: Hydatid disease with hepatic, osseous and muscular involvement.

Final Diagnosis: Hydatid disease with hepatic, osseous and muscular involvement.
References:

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Hydatid disease: radiologic and pathologic features and complications. 

Taourel P, Marty-Ane B, Charasset S, Mattei M, Devred Ph, Bruel JM. 
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Description: Multislice CT axial image shows multiple cystic formations with a maximum diameter of 7.5 cm at sixth hepatic segment level. Compression of inferior vena cava is also evident anteriorly (arrows). Origin:
Description: Multislice CT sagittal image clearly depicts compression on inferior vena cava (arrows).

Origin:
Description: Multislice CT sagittal image shows vertebral erosion at dorsal level. Origin:
Figure 4

Description: Multislice CT axial image demonstrates costal erosions and muscular involvement. Hepatic cysts can also be seen. Origin: