Primary mesenteric fibromatosis: multislice helical CT findings
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Case Type: Clinical Cases
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Patient: 27 years, female

Clinical History:
A patient with a huge abdominal mass, of heavy-elastic consistency, mobile and associated with vague mid-abdominal pain.

Imaging Findings:
The patient presented with vague mid-abdominal pain. Physical examination revealed a huge, mobile abdominal mass of heavy-elastic consistency.
US examination showed a huge mass whose extension was not clearly depicted because of the abdominal meteorism. For further evaluation of the mass, helical CT examination was performed, which revealed a 27 cm x 26 cm x 14 cm mass, with slightly heterogeneous attenuation. The mass seemed to arise from the mesenteric root, displacing but not infiltrating the surrounding structures, such as the intestinal loops and the mesenteric artery, as clearly depicted by coronal and sagittal reconstructed images. The mass showed slightly significant heterogeneous enhancement after administration of iodinate contrast medium.

Because of the onset of diarrhoea during follow-up of this patient, virtual colonography was performed, which detected multiple colonic polyps.

Discussion:
Primary mesenteric fibromatosis is a rare, histologically benign entity which is characterised by fibrous proliferation in the bowel, mesentery or the retroperitoneum. It may present as an isolated lesion, but in 45% of cases it is associated with Gardner syndrome. This is an autosomal-dominant colonic polyposis with extracolonic manifestations including osteomas, cutaneous cysts and desmoid tumours. The behaviour of primary mesenteric fibromatosis is intermediate between benign fibrous tissue proliferation and fibrosarcoma. In fact, fibromatosis typically has an inclination towards involving the visceral abdominal structures in its growth, and tends to recur but does not metastatise. Most reported cases have been in older individuals, and there is a frequent association with familiar polyposis coli, previous trauma, and hormonal imbalance. Mesenteric fibromatosis presents a management challenge for the surgeon.
For many years, the presence of mesenteric fibromatosis and its precise extension could only be proved surgically.
Now CT and MRI have been found to be highly capable of diagnosis and follow-up of this tumour. On MRI the mass usually appears of low intensity on all sequences, due to the presence of abundant collagen within the lesion. As shown in this case, helical multislice CT was extremely capable of characterising the mass showing the homogeneity of the attenuation and slight enhancement after contrast medium administration. All of these imaging features are important in differentiating a benign from a malignant mesenteric mass. Furthermore, multislice CT provided an excellent evaluation of the extension. In fact, combining the advantages of a multirow detector array with a fast gantry rotation time, multidetector computed tomographic scanners can acquire sections at a faster rate than was previously possible. As a result, multidetector CT permits scanning during multiple specific phases of intravenous contrast enhancement and the acquisition of very thin sections over a large area, allowing the creation of multiplanar reconstructions with high z-axis resolution. With the rapid scanning ability of multidetector CT, it is feasible to obtain a three-dimensional data set of the entire liver during a single breath hold. With reconstruction of these data, high-quality three-dimensional images may be obtained. The image quality in reconstructed sagittal, coronal, or curved planes is excellent in most cases. The use of curved multiplanar reconstruction along vessels may more clearly elucidate the anatomical and pathological characteristics than the reading of axial images alone. Such unique imaging approaches may ultimately improve lesion detection, characterisation, and surgical planning. As shown in this case, the multiplanar reconstructed images clearly depict the extension of the mesenteric mass, which extended from the root of the mesentery towards the pelvis.

In conclusion, with the advances in rapid volume rendering and other three-dimensional techniques, a new era of CT-based three-dimensional imaging of diffuse abdominal diseases, such as mesenteric fibromatosis, is becoming a reality.

**Differential Diagnosis List:** Mesenteric fibromatosis

**Final Diagnosis:** Mesenteric fibromatosis

**References:**


Description: Contrast-enhanced CT scan shows a heterogeneous mesenteric huge soft tissue mass which displaces but does not infiltrate the surrounding structures. Origin:
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