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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2012, 29(6):756–757

Medical Imaging Quiz – Case 28

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A 64-year-old woman was referred to our hospital due to worsening fatigue, low-grade fever, mild upper abdominal discomfort for the last three months and a weight loss of about 5 kg over the last six months. On physical examination a palpable mass was revealed in the left upper quadrant of the abdomen. Blood analysis showed a severe hypo/micro anemia and highly inflammatory markers. An axial contrast-enhanced abdominal CT scan showed a large (9.8×6.5×8.5 cm), heterogeneously enhanced mass with well-defined margins. The origin of the mass was unspecified and appeared to adhere to the stomach (fig. 1).

Another 54-year-old woman was admitted to our hospital due to epigastric pain, nausea and vomiting for the last month. Physical examination revealed a palpable mass in the epigastric region. Blood analysis showed a mild hypo/micro anemia. An axial contrast-enhanced abdominal CT scan showed a large (9.5×6.5×9.6 cm), heterogeneously enhanced mass in contact with the anterior side of the stomach. There was not a clear plane between the mass and the adjacent stomach (fig. 2).

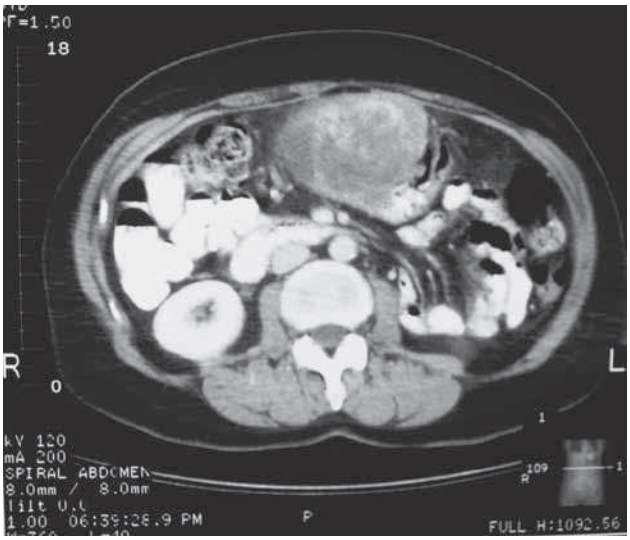

Figure 2. An exophytic gastric stromal tumor (GIST).

Comment

The mesenchymal tumors in the tubular gastrointestinal track (GI) and adjacent soft tissues including esophagus, stomach, small intestine, large intestine, peritoneum and retroperitoneum include gastrointestinal stromal tumors (GIST) and non-gastrointestinal stromal tumors GI (non-GIST) mesenchymal neoplasms. The second category includes: inflammatory fibroid polyp (IFP), desmoid tumors, inflammatory myofibroblastic tumor (IMT), clear cell sarcoma (CCS), synovial sarcoma (SS), smooth muscle tumors (leiomyomas and leiomyosarcomas), schwannoma, mesenchymal polyps, antipocytic tumors (lipomas and liposacromas) and glomus tumors.

GISTs are the most common mesenchymal tumors of GI tract and are believed to originate from pluripotential mesenchymal stem cells programmed to differentiate into intestinal cells of Cajal. They can be benign or malignant. The majority originate in the stomach (60%). Pediatric cases are rare (1.4% of all GIST cases). Patients commonly present with abdominal pain, gastrointestinal bleeding or obstruction. On CT, they vary from small (1 cm) homogenous masses to large (>30 cm) heterogeneous necrotic masses with smooth contour. 80% of GISTs are positive for Kit (CD117).

IMTs are a heterogeneous group of spindle cell proliferation with admixed lymphocytes and plasma cells. They regarded as "intermediate malignancy" tumors, with tendency for local recurrence

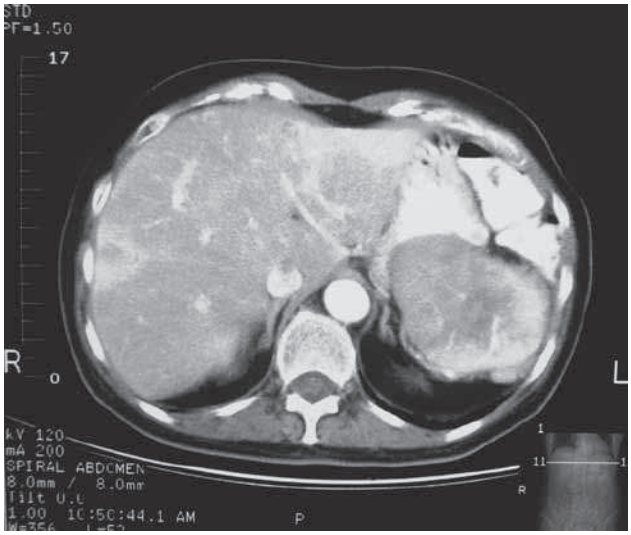

Figure 1. An abdomen inflammatory myofibroblastic tumor.

and a small risk of distant metastasis. They have a predilection for children and the most common anatomical location is the lung. Patients with IMT can present fever, night sweating, malaise, weight loss and anemia, elevated CRP and ESR and or an increased WBC count. CT findings may be most often a soft tissue mass, usually circumscribed, with strong, heterogeneous enhancement. Calcification, hemorrhage, necrosis and invasion of adjacent tissues may be found in a minority of cases. Tumors dimension range from 1 cm to >20 cm, with a mean size of 6 cm. They are negative for Kit (CD117).

Because of their common origin, a GIST or an IMT tumor may confuse every medical specialty, especially the radiologists because the imaging findings of those tumors are not specific. They should be highly suspended in any abdominal solid tumor and in combination with symptoms, hematologic and serologic findings, to avoid misdiagnoses.

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