Case report

An abdominal CT performed in a 28-year-old woman suffering from asthenia, appetite loss and intermittent hypogastric abdominal pain with night sweats and fever for six weeks demonstrates an 8 cm diameter pelvic mass, possibly from mesenteric origin. The non calcified mass shows well-defined margins, homogeneous attenuation before contrast injection and peripheral enhancement after contrast injection at portal phase that slightly progresses at late phase, while the center stays hypoattenuated (Fig. 1). Three weeks later MRI is also performed with T2, T2 fat sat, TSE and T1 fat sat weighted images with and without Gadolinium injection (Fig. 2). Patient is then admitted for surgical laparotomic exploration, which demonstrates a large pelvic mass from mesenteric origin near the terminal ileum (Fig. 3). Twenty-five centimeters of the terminal ileum and the appendix are resected along with six lymph nodes and ileocecal anastomosis is performed. Anatomical pathology examination of the mass concludes with inflammatory myofibroblastic tumor based on proliferation of spindle cells and inflammatory infiltration of lymphocytes at histology (Fig. 4). Ileum, appendix and lymph nodes are normal. Evolution after surgery is good with an uneventful follow-up.

Discussion

Inflammatory myofibroblastic tumor (IMT) is a rare tumor, classified by WHO of intermediate biological potential with tendency for local recurrence and small risk for distant metastasis. Histologically IMT is a mixture of inflammatory cells and myofibroblastic spindle cells proliferation. To our knowledge there is no MRI description of mesenteric IMT in the literature. We would like to emphasize the correlation between medical imaging and anatomical pathology based on our experience of a mesenteric IMT in a 28-year-old patient.

Key-word: Mesenteric, inflammatory, myofibroblastic, tumor, MRI.
fibrosis is «old» with a larger fibrotic component (3).

To our knowledge there is no MRI description of mesenteric IMT in the literature. With this case we would like to emphasize the correlation between MRI imaging of IMT and its histological aspect. In our present case, the lesion has a homogeneous signal intensity on T1 weighted sequence without contrast. On T2 weighted sequence, the lesion presents two components: an irregular central fibrotic component with low signal intensity and a peripheral inflammatory component with relatively high signal intensity. T1 weighted sequence four minutes after Gadolinium injection demonstrates intense enhancement of the peripheral inflammatory component while the central fibrotic component is hypovascular. MRI aspect on T1 weighted images after Gadolinium injection is very similar to the CT aspect at portal venous phase. Peripheral enhancement in both techniques is highly representative of the inflammatory component, but medical imaging is still nonspecific of IMT requiring histological confirmation. Given the similar results of both techniques and the young age of the concerned population (mostly first two decades), MRI should be preferred to CT because of its non-irradiating nature.

Range of differential diagnosis for mesenteric IMT is wide including benign tumors and pseudo-tumors like mesenteric fibromatosis (desmoid tumor) or sclerosing mesenteritis and malignant tumors like lymphoma, GIST or carcinoid tumor metastasis (4). Nonspecific CT and MRI imaging aspect does not ensure certainty of diagnosis so that surgical exploration and anatomical pathology examination are required to differentiate IMT from other tumors. Treatment of choice consists in excision with clear resection margins except for arbitrary locations treated by high doses of systemic steroids which can be associated to low-dose radiation therapy. Local recurrences occur in about 10% to 25% cases of abdominal IMT especially within a year of surgery. Distant metastases are rare, about less than 5%.

References

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