

INTRAPELVIC HIBERNOMA: AN INCIDENTAL FINDING

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Key-word: Hibernoma

Background: A 26-year-old female patient underwent an MRI examination of the pelvis for better evaluation of a suspected uterus didelphys. On MR an incidental finding of a large mass was made.

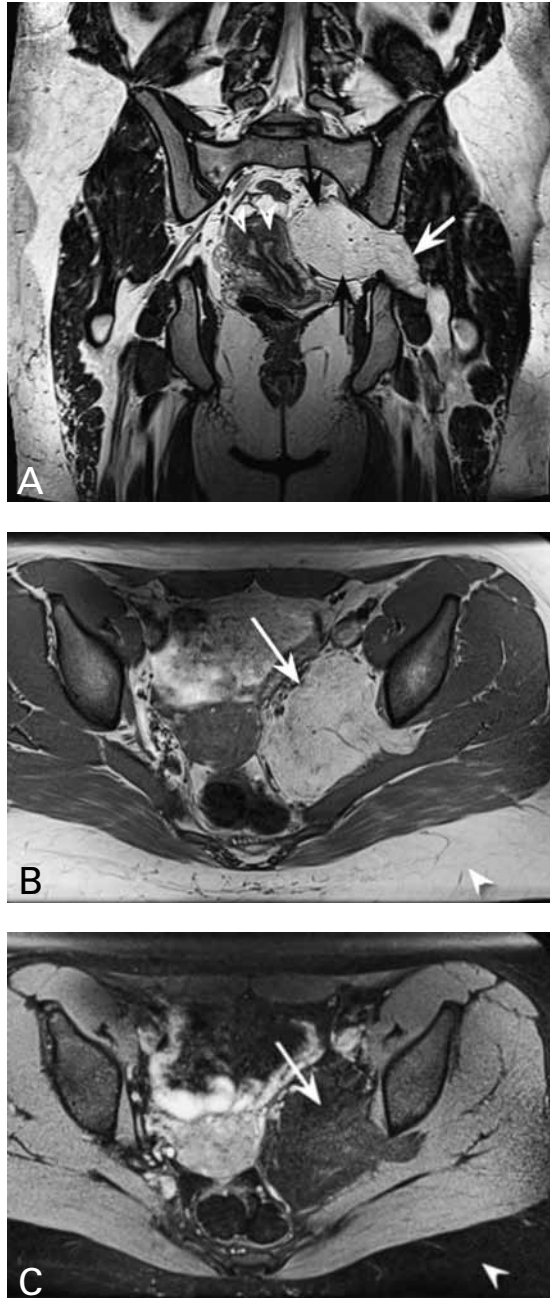


Fig. $\frac{1A}{1B}$
1C

Work-up

MRI of the pelvis (Fig. 1) shows on coronal T2-weighted image (A) a large mass (maximal diameter 11 cm) next to the left pelvic wall (black arrows) and in close vicinity to the obturator and piriform muscles. Part of the mass herniates through the intrapiriform part of the ischiadic foramen (white arrow), along the ischiadic nerve. The mass reveals high signal intensity, and is isointense to the subcutaneous fat. The didelphic uterus (arrowheads) is displaced to the right by this mass. On axial T1-weighted image (B), the mass shows high signal intensities, though slightly hypo-intense in comparison with the subcutaneous fat (arrowhead). On axial T1-weighted image with fat suppression (C), at the same level as in B the mass is of low signal intensity (arrow), though slightly hyperintense in comparison with the subcutaneous fat (arrowhead).

Radiological diagnosis

On these images the differential diagnosis between a large benign lipoma and a "lipomalike" sarcoma was made. The patient underwent a diagnostic laparoscopy. Biopsies were taken. Histopathologic examination revealed the definitive diagnosis of *intrapelvic hibernoma*.

Discussion

A hibernoma is a rare, benign, soft tissue tumor consisting of brown fat. The term was firstly used in 1914 by Gery because of its resemblance to the brown fat in hibernating animals. Hibernomas are also known as 'lipoma of immature adipose tissue', 'lipoma of embryonic fat' or 'fetal lipoma', since the brown fat bears a close resemblance to immature, white adipose tissue. Hibernomas usually occur in

the vestiges where brown fat is found in fetuses and infants, such as the periscapular and interscapular region, the neck, axilla and shoulder, thorax, and retroperitoneum. More infrequently they can also be seen in the abdomen, thigh, buttock, popliteal fossa, and intracranial sites. Their incidence is highest in patients in the 3rd or 4th decades of life. Hibernomas manifest as slowly growing, painless, soft tissue masses. They are typically mobile and pliable and can be warm to the touch because of their hypervascularity. Normally these tumors measure 5 to 10 cm in diameter although there have been reports of hibernomas reaching 20 cm in size. MR-imaging characteristics show subtle changes in signal intensities of the hibernoma in comparison to subcutaneous fat tissue between the described cases. In most cases however the mass is slightly hypointense in comparison with the subcutaneous fat on T1-weighted images. On T2-weighted images the mass usually is iso-intense to the subcutaneous fat. Slightly more hypo- or hyperintense variants have nevertheless been described. Mild heterogeneity and internal septations are noted on many sequences, probably due to vascular tissue intermixed with the fatty components of the tumor. Treatment is complete surgical resection. Local recurrence does not occur with complete excision. Malignant transformation or metastatic spread is not reported.

Bibliography

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