MR imaging features of ovarian fibromas: Emphasis on the detection of a separate ipsilateral ovary

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Purpose: The main diagnostic differential of ovarian fibroma is a uterine leiomyoma. It is well-known that identification of two normal-appearing ovaries indicates a uterine leiomyoma. However, because fibromas can have long pedicle, normal-appearing ovaries can be seen in patients with ovarian fibromas. The purpose of this study was to evaluate the MR imaging features of ovarian fibromas with emphasis on the frequency of detection of a separate ipsilateral ovary.

Materials and Methods: MR images of 11 patients with histologically proven 12 ovarian fibromas were reviewed by two radiologists. Age of the eleven patients ranged from 29 to 63 years old (mean, 42 years). Morphologic and signal intensity characteristics of the mass lesions were analyzed, and visualization or nonvisualization of the ipsilateral ovary was evaluated on T2-weighted images. If ipsilateral ovary was visible, the relationship between the ipsilateral ovary and fibroma was evaluated.

Results: On T2-weighted images, the ipsilateral normal-appearing ovaries were detected in seven ovarian fibromas (58%). Four detected ovaries maintained their normal contours and were connected to the fibromas by the pedicle-like structure. Three ovaries were closely and broadly abutted to the periphery of the fibromas. The mean age of the patients with the detectable ipsilateral ovary was 35 years old and that without visible ipsilateral ovary was 52 years old. The mean size of the fibromas in patients with detectable ipsilateral ovary was 7.2 cm and that in patients without visible ipsilateral ovary was 7.4 cm. The maximal diameters of the fibromas ranged from 3 cm to 15 cm (mean, 7.3 cm). All fibromas showed homogeneous low signal intensity on T1-weighted images. On T2-weighted images, five lesions showed heterogeneous signal intensity with predominant low signal intensity and the remaining seven lesions showed homogeneous low signal intensity. Dense intratumoral calcifications were present in two mass lesions.

Conclusion: Detection of a separate ipsilateral ovary is not rare and can be helpful in the differential diagnosis of the ovarian fibroma from uterine myoma, in addition to the characteristic morphologic and signal intensity characteristics, especially in premenopausal women.

Table 1. Clinical features of ovarian fibromas according to the detection of a separate ipsilateral ovary.

	Visible ipsilateral ovary (n = 7)	Nonvisible ipsilateral ovary (n = 5)
Mean size (cm) of tumor	7.2	7.4
Mean age (yrs) of patient	35	52
Number of premenopausal pt	6	2
Number of postmenopausal pt	1	3

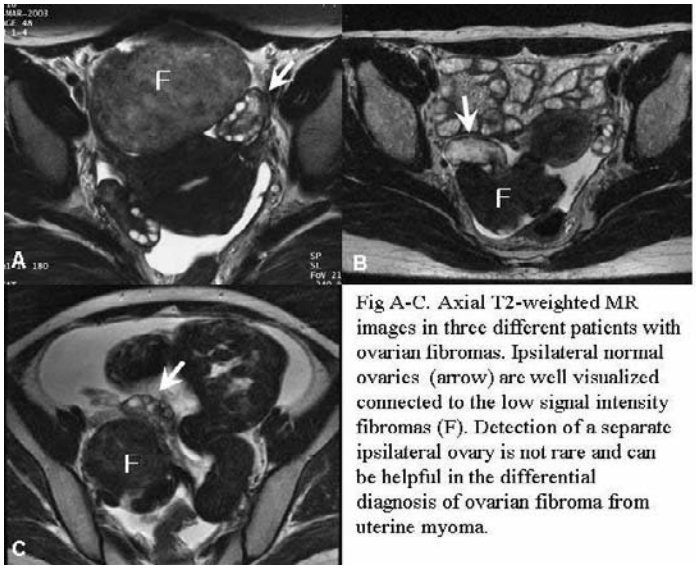

Fig A-C. Axial T2-weighted MR images in three different patients with ovarian fibromas. Ipsilateral normal ovaries (arrow) are well visualized connected to the low signal intensity fibromas (F). Detection of a separate ipsilateral ovary is not rare and can be helpful in the differential diagnosis of ovarian fibroma from uterine myoma.

Reference

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