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Imaging findings of fallopian tube leiomyoma with myxoid degeneration: a case report

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ABSTRACT

Leiomyomas from the fallopian tube are very rare and usually asymptomatic but may cause symptoms by torsion or obstruction. Herein, we describe the detailed imaging findings of tubal leiomyoma with myxoid degeneration. Tubal leiomyoma appeared as a well-defined juxtauterine tumor marginated by low-signal rims with intervening bridging vessels between the tumor and uterus. A tubal mass showing heterogeneous speckled high signals with intermediate signal background on T2-weighted image without diffusion restriction could suggest the probability of tubal leiomyoma with mxoid degeneration.

1. Introduction

Leiomyomas are usually originated from the genital tract organs, particularly from the uterus. In contrast, leiomyomas arising from fallopian tube are very rare. Approximately 84 cases have been reported till this date according to our literature search [1,2]. Although most cases are usually asymptomatic and found incidentally in unrelated surgical procedure or autopsy, the tubal leiomyoma may present symptoms with excessive growth, torsion, obstruction, or ectopic pregnancy associated with mass [3–5]. To the best of our knowledge, there have been only few reports regarding the imaging finding of leiomyoma arising from the fallopian tube [6,7]. We report MR imaging findings of tubal leiomyoma with myxoid degeneration with literature review. This case report was approved by the ethics committee at our institution, and informed consent was waived.

2. Case report

In a 59-year-old woman with known lung cancer (T2a N0 Mx; pTNM stage by the 7th AJCC staging system), right pelvic mass was incidentally found in the positron emission tomography/computed tomography (PET/CT) image during the work-up of lung cancer. She had no abdominal or gynecological symptoms. The nonenhanced axial image of PET/CT (Biograph 40 True Point; Siemens Medical Solutions, Knoxville, TN, USA) showed 4.0×2.5-cm-sized mass in right pelvic cavity, closely abutting the uterus (not shown in the figure). Inhomogeneous 18F-fluorodeoxyglucose uptake was detected in the mass, measuring less than 2.4 maximum standardized uptake value. Transvaginal ultrasonography (Sonoace X4; Samsung Medison, Seoul, Korea) revealed a solid and tubular-shaped mass in right pelvic cavity, measuring about 3.8 cm (Fig. 1A). The mass showed relatively homogeneous low echogenicity. Since the normal right ovary was not visualized on PET/CT and ultrasonography, we assumed the mass arising from the right ovary.

Pelvic MR imaging was performed for further evaluation on a 3.0 Tesla system (Verio; Siemens Medical Solutions, Erlangen, Germany), using a body phased-array coil. MR images revealed an elongated, well-demarcated mass, measuring about 4.7×4.0×2.7 cm (Fig. 1B). The mass was broadly abutting to the uterus and broad ligament, showing the prominent bridging vessels between the mass and uterine body (Fig. 1C, D). The mass showed heterogeneous high and intermediate signal intensity with linear bright signal intensity along the periphery of the tumor on T2-weighted image (Fig. 1B–1D). The mass showed the same signal intensity with the adjacent myometrium on T1-weighted images (Fig. 1E). The mass was surrounded by thin low-signal intensity rim on T2- and T1-weighted images. The mass showed heterogeneous enhancement after Gadolinium contrast injection (Fig. 1F). High b-value diffusion-weighted images (DWIs) showed heterogeneous high-signal intensity in the mass, but apparent diffusion coefficient (ADC) map showed little signal change between two different diffusion coefficient

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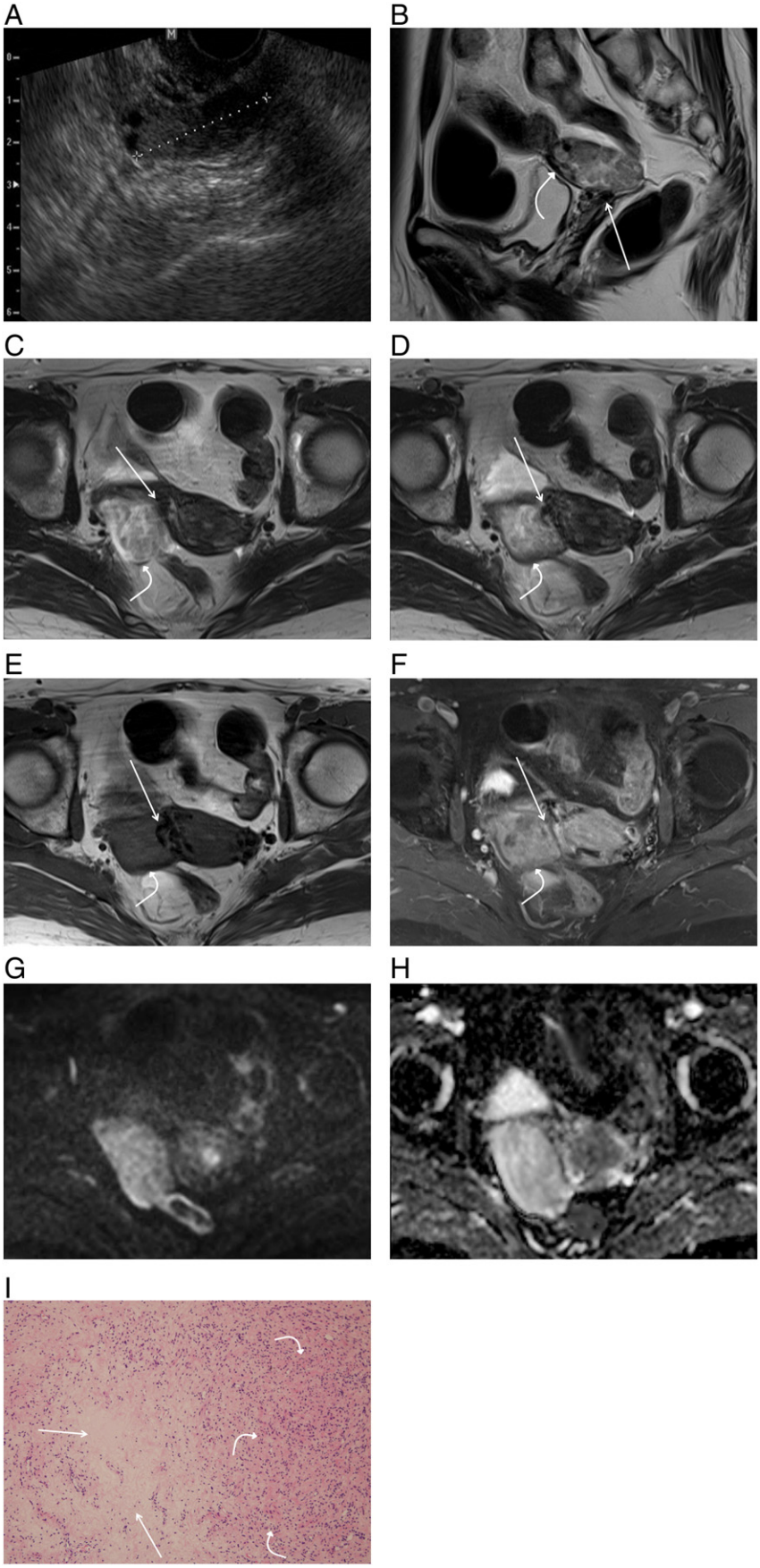
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