J Korean Radiol Soc 2007;57:467 - 470

Synchronous Papillary Tumor of the Fallopian Tube and Endometrium: A Case Report[1]

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Synchronous tumor of the fallopian tube and endometrium is an unusual co-occurrence of gynecologic malignancies. To the best of our knowledge, there have been no reports on synchronous papillary tumor of the fallopian tube and endometrium. In this report, we present the case of a patient who synchronously suffered with papillary serous adenocarcinoma of the fallopian tube and endometrium and the tumor showed characteristic frondlike projections on magnetic resonance imaging.

Index words : Synchronous neoplasms
Fallopian tubes
Papilary carcinoma
Magnetic resonance (MR)

Primary carcinoma of the fallopian tube is a very unusual gynecologic malignancy that accounts for less than 1% of all malignancies of the female genitalia (1). Among them, papillary serous adenocarcinoma appears to be the most common histologic type (2).

Endometrial cancer is one of the common gynecologic malignancies. Most endometrial cancers are endometrioid adenocarcinomas and only approximately 10% are uterine papillary serous carcinomas (3). To the best of our knowledge, there has been no case report about synchronous carcinoma of the fallopian tube and endometrium. Therefore, we report here on the findings of magnetic resonance imaging (MRI) of papillary serous adenocarcinoma at the fallopian tube and endometrium.

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Received June 11, 2007 ; Accepted September 12, 2007
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Case Report

A 47-year-old, gravida 2, para 2, postmenopausal woman presented with profuse vaginal discharge that she had experienced for 3 months. She had a history of hypertension and diabetes mellitus. Physical examination revealed palpable fist-sized masses on both sides of the lower abdomen. On laboratory examination, the carcinoembryonic antigen (CEA) level was slightly elevated at 6.9 ng/mL (normal < 5 ng/mL), yet the cancer antigen 125 (CA125) level was 5.3 U/mL, which was within the normal range (normal < 36 U/mL). There were no abnormal cells on the Papanicolaou smear. Well-defined, anechoic sausage-shaped cystic masses were identified in both adnexa on the transvaginal ultrasound exam. On the right side, multiple nodules were also seen within a large cystic mass that measured 10×5×5 cm in size. The left one showed homogenous anechoic featured without internal nodularity, and it measured 6×4×4 cm in size.

The T2-weighted images demonstrated multiple vari-

able sized polypoid nodules within the right dilated fallopian tube (Fig. 1A). The left fallopian tube was also dilated, but any nodules were not revealed (not shown). A 1cm-sized nodule was faintly seen on the posterior wall of the endometrial cavity (Fig. 1B). On the T1-weighted gadolinum-enhanced, fat-suppressed images, multiple polypoid nodules were seen to be densely enhanced and some of them appeared as frondlike projections in the right fallopian tube (Fig. 1C). A small nodule in the posterior wall of the endometrial cavity was also enhanced and then it was more definitely visualized on the T1-weighted gadolinum-enhanced, fat-suppressed images (Fig. 1D), as compared with the T2-weighted images. There was no abnormal lesion seen on MRI, that indicating that the tumor had spread into other portions of the uterus to the isthmus of the right fallopian tube. There were no lymphadenopathy in the pelvic cavity and both paraaortic areas, and no ascites was noted in the peritoneal cavity.

Total abdominal hysteretomy, bilateral salpingo-oophorectomy, appendectomy, omentectomy, pelvic and para-aortic lymph node dissection and peritoneal washing were performed. There were gray-colored, cystic masses in both adnexa, indicative of dilated fallopian tubes, and these masses measured about 10×5×5 cm in the right side and 6×4×4 cm in the left side. On sectioning, the right fallopian tube contained clear yellowish serous fluid and multiple yellowish papillary projections. The left fallopian tube was also dilatated with serous fluid, but it was without papillary projections.

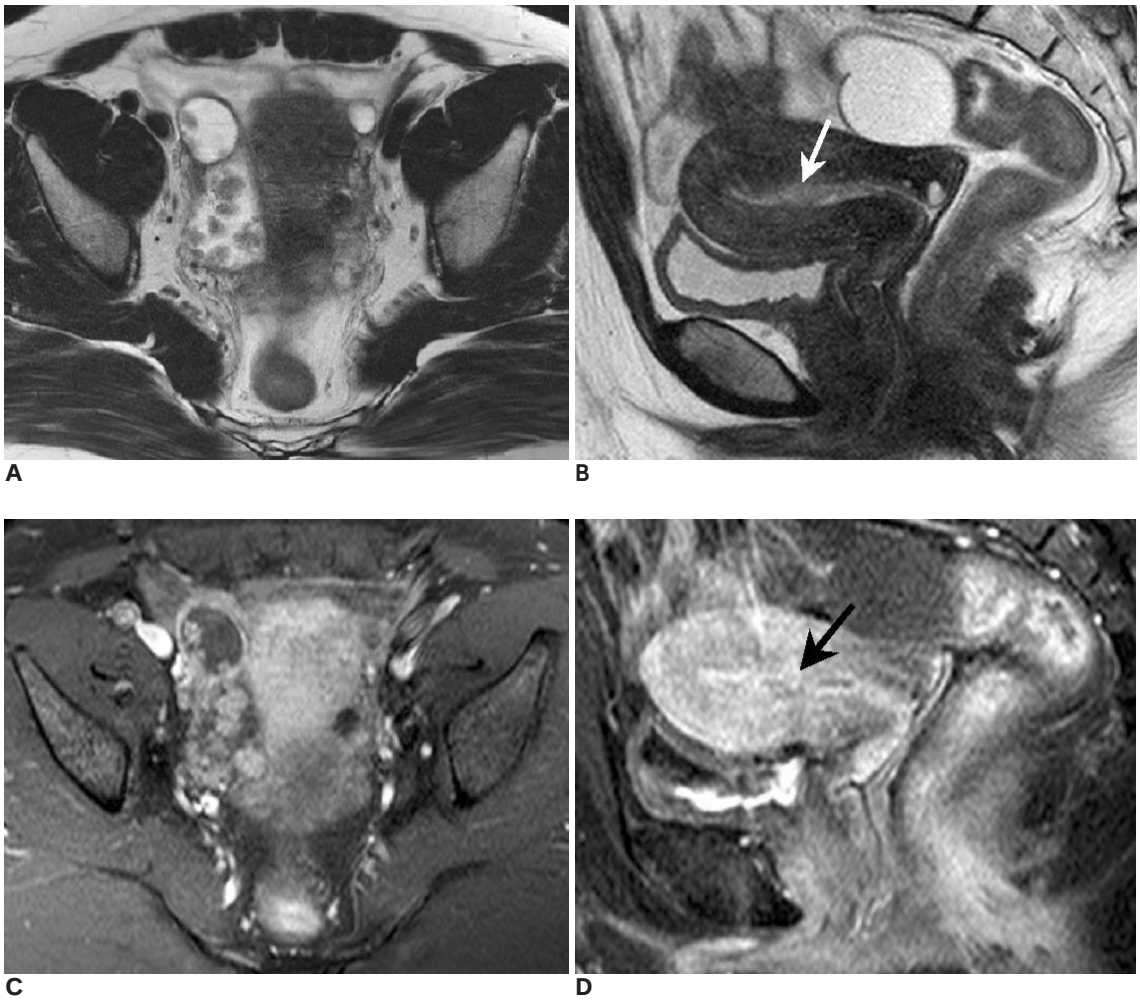

Fig. 1. A 47-year-old woman with synchronous papillary tumor of the fallopian tube and endometrium.
A. On the T2-weighted axial image, numerous, slightly high-signal intensity nodules with low-signal intensity cores are seen in the right dilated fallopian tube.
B. On the T2-weighted sagittal image, a tiny high signal intensity nodule is seen at the posterior wall of the corpus (arrow).
C. On the T1-weighted, fat-suppressed gadolinium-enhanced axial image, multiple nodules are densely enhanced with frond-like projections.
D. On the T1-weighted, fat-suppressed, gadolinium-enhanced sagittal image, the tiny nodule shows dense enhancement (arrow).

Both ovaries were atrophied and separated with bilateral cystic masses. An endometrial polypoid nodule was noted on the cut section of the uterus; the nodule measured 2.2×0.9 cm in size. There was no enlargement of the pelvic and para-aortic lymph nodes and no ascites.

The histopathologic diagnosis was moderately differentiated primary papillary serous adenocarcinoma of the right fallopian tube with no metastasis in 26 lymph node biopsies and moderately differentiated papillary serous adenocarcinoma at the endometrium with myometrial invasion. There was a long segment of normal skipped tissue between the isthmus of the right fallopian tube and the uterine corpus, and there was neither lympho-vascular invasion nor peritoneal seeding. So both lesions were thought to be synchronously occurred carcinomas. This case was classified as FIGO stage IB endometrial cancer and FIGO stage IA tubal cancer. Six cycles of paclitaxel plus carboplatin combination chemotherapy were administered. She has been disease-free for 5 months after the operation.

Discussion

Synchronous primary neoplasm of the female reproductive tract is rare. According to a previous retrospective study, invasive synchronous primary cancers account for about 0.7% of the gynecological cancers. The most frequent form of synchronous primary gynecologic cancer is a combination of ovarian and endometrial cancer (0.3%) (4).

Primary fallopian tube carcinoma constitutes 0.3% to 1% of all gynecologic cancers (1). More than 90% of fallopian tube carcinomas are papillary serous adenocarcinoma, and the histologic appearance and behavior are similar to those of ovarian serous carcinoma (2). Fallopian tube carcinoma mainly spreads to the peritoneum, lymph nodes or distant organs (3). The MR findings of primary tubal cancer are not known well. Although they didn't describe the histololgic types of fallopian tube cancers, M. Mikami et al. reported that 6 cases of 8 total primary fallopian tube cancers were observed as solid masses with or without cystic portions, and only two other cases showed sausage-shaped masses with papillary projections on MR evaluation (5).

Cases of ovarian papillary serous cystadenocarcinoma show excrescences as fronds with a low signal intensity core on the T2-weighted MR images. The papillary projections are densely enhanced on the T1-weighted, fat-suppressed gadolinum enhanced images (6). The histologic features of ovarian serous papillary cystadenocarcinoma are multiple papillary excrescences and a central fibrous core. Although there has been no report about the specific MR findings of tubal papillary serous adenocarcinoma, it's possible that the MR imaging features of tubal papillary serous adenocarcinoma resemble those of ovarian papillary serous adenocarcinoma on the basis of their similar histologic appearance and behavior, like for our case.

Endometrial papillary serous carcinoma is a rare variant of papillary endometrial cancer, and 33 - 59% of the former tumor contains psammoma bodies (7). This lesion has a great tendency of lymphatic, deep myometrial and peritoneal spread, and it has a poor prognosis due to the high risk of recurrence.

In general, endometrial cancer demonstrates increased signal intensity on T2-weighted MR images and iso- or low signal intensity on T1-weighted images with dense enhancement and with or without widening of the endometrial cavity (8). Although the specific MR findings of endometrial papillary serous adenocarcinoma have not yet been reported, nodular lesion extending into the uterine cervix with uterine cavity dilatation was identified in a case of advanced stage IV uterine papillary serous carcinoma (9).

In our case, a sausage-like dilated hydrosapinx with frondlike papillary projections was seen on the MR images and another endometrial nodule was observed with enhancement. Each lesion of the endometrium and right fallopian tube was detected separately on MR images without any contiguous abnormality between them. There was no radiological evidence of lymphatic, hematogenous or peritoneal spread. Histologically, the papillary serous adenocarcinomas were located at the right fallopian tube and endometrium, respectively. There was neither lympho-vascular invasion nor peritoneal spread. There was a long segment of normal skipped tissue between the isthmus of the right fallopian tube and the uterine corpus. So, each of the lesions was thought to be synchronous cancer histologically, and not metastasis.

Stage IA and IB fallopian tube cancer may not need further adjuvant treatment after complete surgery (2). Papillary serous carcinoma of the endometrium has shown a relatively poor prognosis, and a considerable discrepancy between the clinical and surgical staging of endometrial papillary serous carcinoma has been reported. So, adjuvant therapy is recommended to all patients suffering with endometrial papillary serous adenocarci-

noma, and even for treating the early stage of disease (3). Our patient underwent 6 cycles of adjuvant chemotherapy and radiation treatment is being planned.

We report here on the MR imaging features of synchronous serous papillary adenocarcinoma of the fallopian tube and uterine corpus. The presence of frondlike papillary projections may be an important, helpful MR finding for making the diagnosis of tubal serous papillary adenocarcinoma, and this tumor tends to resemble ovarian papillary serous cystadenocarcinoma.

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대한영상의학회지 2007;57:467 - 470

난관과 자궁 내막에 동시에 발생한 유두상 선암종: 증례 보고[1]

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난관과 자궁 내막에 원발성 부인과 종양이 동시에 발생하는 경우는 흔치 않다. 3개월간의 질분비를 주소로 내원한 47세 여성의 자기공명영상에서 난관에 특징적인 융모상 돌기 모양의 병변이 있었으며, 자궁 내막에도 조영증강을 보이는 결절성 병변이 있었다. 이는 수술로 난관과 자궁 내막에 동시에 발생한 유두상 선암종으로 진단되었다. 저자들이 아는 바로는 난관과 자궁 내막에 동시에 발생한 유두상 선암종에 대한 보고는 없어, 이의 MRI 소견에 대해 기술하고자 한다.