

## 병기 IB 자궁 경부 선암의 난소 전이 : 증례 보고

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### Ovarian Metastasis from Stage IB Cervical Adenocarcinoma : A Case Report

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Ovarian metastasis by cervical cancer is rare, especially in early stage cancer. Recently, concerning to quality of life, it is current issue that ovarian preservation in early stage cervical cancer. But it must be careful. In the case of squamous cell carcinoma of cervix, ovarian preservation in early stage cancer is well established, while this remains controversial in adenocarcinoma. The case presented here is a stage Ib cervical adenocarcinoma with right ovarian metastasis. In the operative findings, both ovaries were grossly unremarkable, and metastasis was detected on the postoperative histopathologic examination. We consider that it is not so secure that preservation ovaries in patient with cervical adenocarcinoma as compared to squamous cell carcinoma.

**Key Words :** Ovary, Metastasis, Cervix, Adenocarcinoma

#### INTRODUCTION

The incidence of cervical cancer in young patients is increasing,<sup>1</sup> and the preservation of ovarian function is thought to be particularly important for the physiologic and psychosexual well-being of patients. Currently, it is well established that the ovaries can be preserved in young women who undergo surgical treatment for early stage squamous cell carcinoma of cervix, but in cases of adenocarcinoma of the cervix, this remains controversial. Although ovarian metastasis from cervical cancer is rare, adenocarcinoma of cervix shows higher incidence than that of squamous cell carcinoma. Ovarian metastasis occurs in less than 0.5% of women with squamous cell carcinoma, and in slightly more than 1.4% of women with adenocarcinoma.<sup>2</sup> Another important point is that

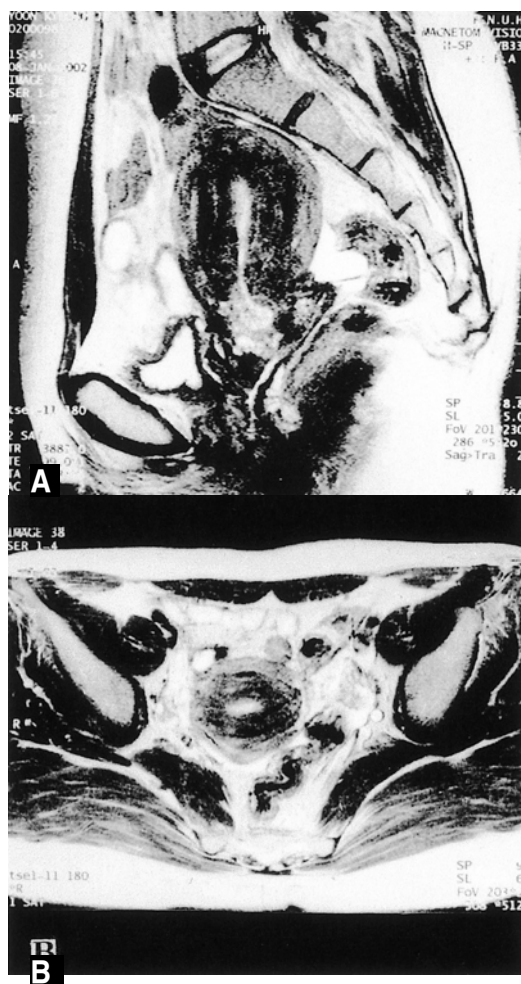
ovarian metastasis is histologically one of ominous signs in patient with cervical cancer in addition to direct extension to vagina, corpus of uterus, and parametrium, or nodal metastasis, regardless of stage.<sup>3</sup> We report an unusual case of ovarian metastasis in a patient with stage IB cervical adenocarcinoma without apparent risk factors.

#### CASE REPORT

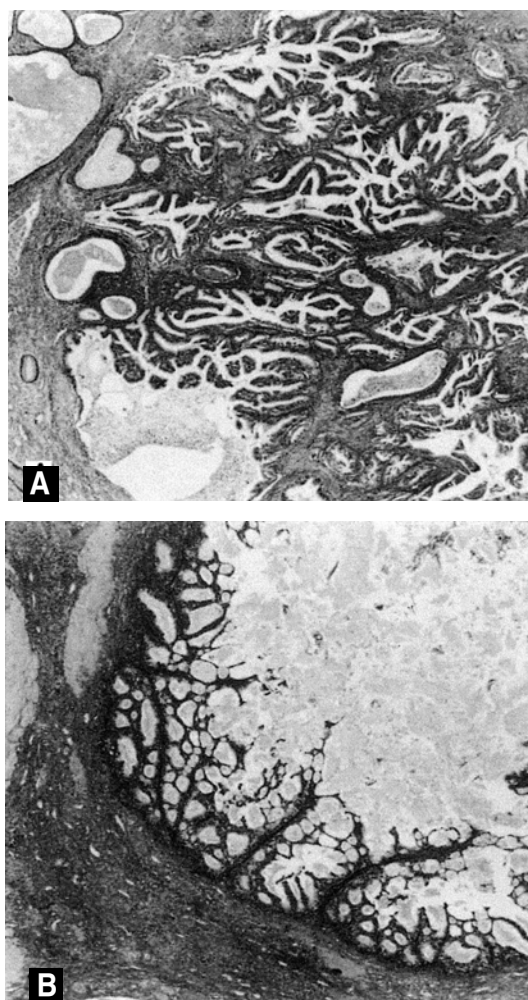
A 42-year-old multiparous woman (gravida 5, para 2, artificial abortion 2, spontaneous abortion 1) was referred to our institution for evaluation of cervical malignancy. She visited private clinic for abnormal vaginal bleeding for about 10 days after menstruation and Pap smear revealed adenocarcinoma. Then she referred to our hospital. Speculum examination revealed no abnormal

lesion in cervix except mild hypertrophy. A subsequent punch biopsy revealed endocervical adenocarcinoma. The vaginal mucosa and vulva were normal. Pelvic examination revealed a normal sized, well movable uterus and no palpable mass on both adnexa. There was no palpable extension of the tumor into the parametrium or rectovaginal tissues. Hematologic and chemistry profile, chest radiography and cystoscopy were negative for significant findings. Pelvic MR imaging demonstrated the mass lesion confined within the cervix and normal appearing ovaries. No pelvic lymph node enlargement was evident (Fig. 1). The tumor was staged as IB (FIGO

criteria). After appropriate counseling, the patient underwent a radical hysterectomy with both salpingo-oophorectomy with bilateral pelvic lymphadenectomy. On operative findings, the left ovary was grossly normal and the right ovary had a tiny nodule on its surface, which was too small to recognize easily. A small amount of ascites was found and sampled. Pathologic examination revealed moderately differentiated endocervical adenocarcinoma measuring 2.5×2.0×1.0 cm with direct invasion into the middle third of the cervical stroma (Fig. 2). There was no apparent vascular or lymphatic space



**Fig. 1.** MRI finding, A) & B): Mass lesion was not exceeding the cervix and both ovaries look normal. There were no enlarged pelvic lymph nodes.



**Fig. 2.** Histologic findings, A) moderately differentiated adenocarcinoma (endocervical type) of the uterine cervix (H&E, ×40). B) ovarian metastasis of adenocarcinoma of the uterine cervix (H&E, ×40).

involvement, and the resection margins of vaginal cuffs and parametria were free of tumor. The right ovary revealed metastatic adenocarcinoma. All pelvic node samples were negative for tumor. Peritoneal cytologic studies were negative for disease. Postoperative adjuvant chemotherapy for ovarian metastasis was done with an IPE regimen (ifosfamide 2 g/m<sup>2</sup>, cisplatin 50 mg/m<sup>2</sup>, and epirubicin 60 mg/m<sup>2</sup>). After 2 cycles, liver toxicity occurred and pelvic irradiation was administered. Hormonal replacement therapy was begun before discharge. The patient was well without evidence of disease for 14 months postoperatively.

## DISCUSSION

Early stage cervical carcinoma rarely metastasizes to the ovary. Data indicate that ovarian metastases occur in 1.4-1.6% of stage IB cervical adenocarcinomas. The highest incidence (7.7%) was reported by Tabata et al.<sup>4</sup>

Recent studies on the treatment of cervical cancer have focused on the quality of life of patients. Specifically, it has become increasingly important to strike a balance between pursuing a radical cure and preserving various organ-related functions. The conventional method of treatment has been either surgical treatment and radiotherapy for stages IB and II cervical cancer or radiotherapy for stages III and IV. Dynamic changes in hormones greatly affect the quality of life of women following bilateral oophorectomy performed by radical surgery or postoperative radiation.<sup>5</sup>

The concept of ovarian preservation at the time of radical hysterectomy for early stage squamous cell cancers of the cervix is well established. In 1957, McCall et al.<sup>6</sup> published the first definitive study of preservation of ovaries in patients with cervical cancer treated by radical surgery. All of their patients had squamous cell lesions.

However, Mann et al.<sup>7</sup> reported two cases of ovarian metastasis in stage IB adenocarcinoma of the cervix. They suggested that the practice of ovarian preservation during surgery for early adenocarcinoma of the cervix was not as safe as had been established in squamous lesions, and that sacrificing the ovaries and providing

hormonal replacement postoperatively may be a safer course.

Toki et al.<sup>8</sup> reviewed 597 cases for microscopic ovarian metastasis of the cervical cancer. In their study, only 3 of 597 (0.5%) [1 of 524 (0.19%) squamous cell carcinomas, and 2 of 36 (5.5%) adenocarcinomas] showed ovarian metastasis, and all 3 cases were stage IIb. None of the stage Ib cancer cases had ovarian metastasis. They concluded that it may not be safe to preserve the ovary in cases of adenocarcinoma of the uterine cervix compared with squamous cell carcinoma because their metastatic lesions were microscopic.

In another report, the Gynecologic Oncology Group (GOG) studied that 121 patients with stage IB adenocarcinoma of the cervix and identified ovarian spread in 2 patients (1.7%), who also had other extracervical disease.<sup>9</sup> The GOG study concluded that ovarian preservation is acceptable in cervical adenocarcinoma as in squamous cell carcinoma, especially when the ovaries appear normal and there is no evidence of extracervical disease.

Many studies have been performed to identify risk factors for ovarian metastasis. Parham et al.<sup>10</sup> reported a case of metastasis in a transposed ovary in a 33-year-old woman with a bulky stage IB cervical adenocarcinoma. The metastasis was noted 6 months following postoperative external pelvic irradiation. In pathologic examination, cervical lesion directly invaded into the middle third of the cervical stroma and extended into the junction between the endocervix and lower uterine segment, and there was metastatic lesion in obturator lymph node. They emphasized not overlooking potential anatomic risk factors during operation, such as involvement of the isthmus or corpus particularly if it is accompanied by deep cervical stromal invasion.

Natsume et al.<sup>11</sup> reviewed 82 patients with stage IB and II cervical adenocarcinoma to identify those patients with adenocarcinoma of the cervix in whom ovarian preservation might be acceptable. In their study, only deep stromal invasion is an independent risk factor for ovarian metastasis. They concluded that although it would be reasonable to conserve normal-appearing ovaries in young women undergoing radical hysterectomy for

treatment of stage IB cervical adenocarcinoma, intraoperative inspection of the radical hysterectomy specimen may identify deep cervical invasion or extrauterine spread in those who are at increased risk of ovarian metastasis.

Nakanishi et al.<sup>12</sup> studied possible differences in ovarian metastasis between squamous cell carcinoma and adenocarcinoma of the cervix. The incidence of ovarian metastasis from cervical adenocarcinoma was associated more closely with tumor size than clinical stage, whereas it was more associated with clinical stage in squamous cell carcinoma. They suggested that the incidence of ovarian metastasis from cervical cancer is rare in patients with the disease earlier than clinical stage IIa squamous cell carcinoma and those with small adenocarcinoma of less than 30 mm in maximum diameter.

Although it is rare, but ovarian metastasis can occur in early stage cervical adenocarcinoma. In our case, stage Ib cervical adenocarcinoma, there was no apparent risk factor for ovarian metastasis. A previous report suggested some risk factors for ovarian metastasis such as the extension of the tumor into or beyond the uterine isthmus, extracervical disease, deep cervical stromal invasion, lymph node metastasis, and bulky mass. However, in our patient, the lesion was confined to the cervix and no apparent extracervical disease except a tiny nodule on the surface of the ovary. It is undoubtedly desirable to preserve ovarian function in a young patient, but we also agree that it must be cautious when determining the preservation of ovaries, especially for the treatment of cervical adenocarcinoma, even in the early stage. It is also needed that careful examination during operation to find of extended lesion. To establish the risk factors for ovarian metastasis in early stage adenocarcinoma of the cervix and to determine appropriate indications for ovarian preservation during radical management, more investigations and studies are needed.

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## 국문초록

자궁경부암의 난소 전이는 드물다. 특히 조기암일 경우 그러하다. 최근 들어 삶의 질에 대한 관심이 높아지면서 초기 자궁경부암의 치료시 난소보존의 문제가 많이 거론되고 있다. 초기 자궁경부 편평상피암의 치료에서 난소 보존은 비교적 잘 확립되어져 있으나, 자궁경부 선암의 경우 아직 논란의 여지가 있다. 본 증례는 우측 난소에 전이를 동반한 병기 Ib 자궁경부 선암의 예이다. 수술 소견상 양측 난소는 육안 및 촉진 소견상 별 특이 소견이 없었고 자궁경부 밖으로 병변이 진전된 육안 소견도 없었으며, 술 후 병리조직 검사에서 전이가 판명되었다. 자궁경부암의 난소 전이는 불량한 예후를 나타내는 인자중 하나로 본 저자들은 자궁경부 편평상피암에 비해 자궁경부 선암의 경우 난소 보존이 그리 안전하지만은 않다고 생각하며 초기자궁경부암의 난소전이의 위험인자에 대한 더 많은 연구가 있어야 할 것으로 생각한다.

**중심단어 :** 난소, 자궁경부, 선암, 전이