Pelvic lymph node metastasis in microinvasive adenocarcinoma of cervix

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Introduction
Cancer of the uterine cervix is the second most frequent neoplasia affecting worldwide. The World Health Organization has estimated that more than one million women are currently affected by this disease, and that approximately 95% of the cases occur in developing countries. With the present availability of screening test for cervical cancer, the incidence of uterine cervical cancer is decreasing now in developed countries. In Korea, however, microinvasive cervical cancer is relatively increasing, especially in young aged women, and now, more than 25% of new cases of uterine cervical cancer are microinvasive cervical cancers.

Squamous cell carcinomas account for approximately 80% of the carcinomas of the cervix, whereas adenocarcinomas account for 15%. Microinvasive adenocarcinoma of the cervix account for only 12% of all superficially invasive tumors. The category of microinvasive carcinoma is widely accepted for squamous cell carcinomas. It is less accepted for adenocarcinomas because fewer cases have been studied. Here, we report a case of 37-year-old woman with stage IA1 adenocarcinoma of the cervix with pelvic lymph node metastasis, and we review the relevant literatures.

Case Report
A 37-year-old woman, para 2 was referred to Hallym University Sacred Heart Hospital from a local clinic with the suspicion of cervical cancer. She had suffered from vaginal spotting for the past 6 months, which was associated with foul smell discharge. She was a non smoker, married for 15 years and had two full-term spontaneous vaginal deliveries. Her first child was delivered when she was 26. She reported that she had had a single sexual partner since she began sexual activity 15 years earlier. There was no significant past medical or surgical history. On physical examination, the
The patient was generally well, weighed 69 kg and not pale. General examination was unremarkable. Hematological examination was within normal limits. Clinically, her cervix was normal in appearance and there was no parametrial thickening on rectal examination. The uterus was slightly enlarged and no adnexal mass was palpable. According to a local doctor’s medical opinion, her cervical cytology demonstrated high grade intraepithelial lesion (HSIL) and the pathological examination on the specimen of cervix suggested the presence of adenocarcinoma of cervix.

To confirm the diagnosis, the patient underwent conization by means of loop electrosurgical excision procedure (LEEP) in our clinic. Histopathological examination on the specimen revealed the presence microinvasive adenocarcinoma infiltrating the cervical wall to a depth 3 mm. No lympho-vascular space invasion was detected and all surgical margins were negative. The blood levels of various tumor markers were as follow: carcinoembryonic antigen, <0.5 ng/mL; CA-125, 104.62 U/mL; and squamous cell carcinoma antigen, 0.1 U/mL. Even though this patient’s disease was technically stage IA1 by International Federation of Gynecologists and Obstetricians system, there was still a possibility that the cancer cells had spread so radical surgery was planned. A magnetic resonance imaging was performed as a preoperative screening as well as to identify any metastatic disease and revealed unremarkable. One week after LEEP, the patient underwent radical hysterectomy on March 2008, and laparotomy demonstrated a normal appearing uterus, cervix, fallopian tubes, and ovaries. Prior to pelvic lymphadenectomy, we planned intraoperative detection of the sentinel lymph nodes. After the induction of general anesthesia, we injected 5 mL of isosulfan blue dye into the cervix at the three, six, nine, and twelve o’clock orientation and investigated lymphatic mapping of sentinel lymph nodes. Under direct visualization, the blue colored lymphatic channels were identified and were considered sentinel lymph nodes. So, two surgically removed lymph nodes were sent for frozen section. One of the two, which was hard and fixated to right obturator nerve, contained metastatic tumor cells. So, the patient underwent radical abdominal hysterectomy with bilateral salpingo-oophorectomy and both pelvic lymph node dissection, and the specimen was submitted for histopathological evaluation.

Gross examination revealed a slightly enlarged uterus, and the external surface of the uterus appeared smooth. The fallopian tubes and the ovaries were unremarkable (Fig. 1). Microscopically, there were multifocal stromal microinvasion noted (maximum depth of invasion was less than 1 mm), accompanied by cervical dysplasia (Figs. 2, 3). No vascular or lymphatic invasion were noted. The fallopian tubes and the ovaries were free of tumors. All lymph nodes were negative excluding right obturator lymph node (Fig. 4). The final diagnosis was adenocarcinoma of the cervix, stage IA1.

The postoperative recovery was uncomplicated. The patient was discharged 18 days later and four weeks after surgery, the patient initiated chemoradiation consisting of weekly cisplatin (40 mg/m² × 6), and received a total of 50.4 Gy central external beam radiotherapy. After the operation and chemoradiation, the CA-125 level returned to within normal range. She remained disease-free at her most recent follow up 33 months postoperatively.