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Clinicopathological Conference Report

Tumor Clinic Unit 3

Clear Cell Endometrial Carcinoma in a Postmenopausal Woman with Rapid Recurrence: A Rare Variant

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INTRODUCTION

Endometrial cancer is the most common gynecologic malignancy in developed countries, and its incidence has more than doubled over the last 10 years. Clear cell carcinoma typically occurs in the ovaries, is rarely seen in the cervix or vagina, and very rarely occurs in the endometrium, accounting for less than 3% of all endometrial cancers. Clear cell carcinoma is characterized by abundant cytoplasm like in clear cell renal cell carcinoma and clear hobnail cells,[1] it is presumed that clear cell carcinomas are of Müllerian duct origin.[1] The authors report a rare case of a 57-year-old woman who visited our hospital due to postmenopausal vaginal bleeding and had advanced stage clear cell carcinoma of the endometrium.

CASE REPORT

A 57-year-old woman visited our outpatient department with postmenopausal vaginal bleeding. She was a known case of bronchial asthma on medical therapy. Her complete blood count, serum biochemistry, ultrasonography, office endometrial biopsy, and magnetic resonance imaging were done. Ultrasonography showed a 3 × 3 cm growth in the endometrial cavity. Endometrial biopsy showed clear cell adenocarcinoma of uterus. Magnetic resonance imaging showed hypo- to isointense mass measuring 6 × 3.9 × 3.6 cm distending the endometrial cavity, extending into cervical canal, with ill-defined myometrial and endometrial junction and suggestive of deep myometrial invasion. Bilateral adnexae were not visualized. Staging laparotomy with total abdominal hysterectomy (TAH), bilateral salpingo-oophorectomy (BSO) with pelvic and para-aortic lymphadenectomy, and infracolic omentectomy was performed. Histopathology report showed uterine cavity showing large polypoidal growth containing the tumor, arising from fundus and body of anterior half measuring 6 × 4.5 × 3 cm with multiple papillary projections. No myometrial invasion and no lymphovascular emboli were seen. Bilateral parametrium, fallopian tubes, ovaries, omentum, and all sampled lymph nodes were free of tumor. So, final staging of our patient was surgical stage IA. Patient was found to have a recurrence at vault on day 36 postoperatively. Received external beam radiotherapy of 46 Gy was divided into 23 fractions over 4.5 weeks. External beam radiation therapy was followed by vault brachytherapy (high dose rate) 8.5 Gy in two sessions. In view of high grade of the tumor and rapid vault recurrence, the patient was also given six cycles of carboplatin and paclitaxel following radiotherapy. Postradio and chemotherapy contrast-enhanced computed tomography (CECT) abdomen and pelvis showed no residual disease. Five months postchemotherapy, patient presented with back pain. Technetium 99 methyl diphosphonate scintigraphy showed skeletal metastasis in 6th and 7th ribs, L5 vertebra and bilateral iliac bones, and collapse of D9 vertebra. The CECT chest and abdomen showed metastasis in left lung, multiple deposits in pelvis, and omental and peritoneal thickening. Ultrasonography-guided fine needle aspiration

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cytology from lung masses showed adenocarcinoma. Immunohistochemistry showed positivity for paired box gene 8, indicating lung masses to be metastasis from primary endometrial carcinoma. Now the patient is on palliative radiotherapy and follow-up.

DISCUSSION

Endometrial cancer is the seventh most common type of cancer among women, accounting for 3.9% of all cancers and 1.7% of all cancer deaths in women.[2] Although prevalence rates vary according to studies, clear cell carcinoma represents about 3% of all endometrial carcinomas.[3,4] Clear cell carcinomas developing in any of the female reproductive organs are identical in cytological variants, histological patterns, and ultrastructure. It is generally accepted that clear cell carcinoma is developmentally derived from the Müllerian duct.[5] Most common symptoms are vaginal discharge or vaginal bleeding lasting for several weeks or years, and most underlying diseases, such as hypertension, diabetes, obesity, or other symptoms may be associated. Clear cell cancer is often diagnosed by sonographic appearance of endometrial tumors and endometrial biopsy when the above symptoms are associated. According to the National Comprehensive Cancer Network guidelines version 2, 2016, in biopsy-proven clear cell carcinoma TAH + BSO + pelvic and para-aortic lymphadenectomy considering maximum tumor debulking should be done. Chemotherapy with or without vaginal brachytherapy or tumor-directed radiotherapy alone can be considered as adjuvant therapy in stage IA. Observation alone can be done in selected patients with no myometrial invasion and lymph vascular space invasion. For stages IB and above, chemotherapy alone or along with tumor-directed radiotherapy is recommended.[6] Posttreatment surveillance includes thorough history and physical examination and educating cancer survivors about the concerning symptoms. Review of history and physical examination should be done every 3 monthly for first 2 years, followed by 6 monthly for 3 to 5 years, and then yearly after that.[7]

Typical sites of recurrence include vagina, pelvic and para-aortic lymph nodes, peritoneum, and lungs. Atypical sites of recurrence include extraabdominal lymph nodes, most commonly being supraclavicular lymph nodes, intraabdominal organs, most commonly liver. Other atypical sites include central nervous system and musculoskeletal and soft tissues in 1 to 7% cases. The present patient had lung metastasis. Clear cell carcinoma is associated with a poor prognosis. Survival rate ranges from 20.6 to 62.5%.[8] Survival rates for stages III and IV are as low as 20 to 30%.[9] This case is unique for its rapid recurrence and widespread metastatic spread. Although initially at stage 1, vault recurrence was seen at 5 weeks postoperative, and within 9 months lung metastasis has also been confirmed.

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