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Effective combination chemotherapy of taxanes and platinum in advanced uterine cervical cancer : a case report

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Abstract

The prognosis of advanced cervical cancer remains poor. Recently, the significant activity of paclitaxel has been shown in advanced cervical cancers. We report a patient with advanced uterine cervical cancer who responded to neoadjuvant combination chemotherapy with taxanes and platinum.

The patient was a 53-year old woman who presented with pollakisuria, lumbago, and pain in the anus and inguinal lesion, without genital bleeding. The findings indicated a clinical diagnosis of stage 4b disease with lung metastasis. We performed neoadjuvant combination chemotherapy with 7 courses of TC therapy (paclitaxel and carboplatin) and 7 courses of DP therapy (docetaxel and cisplatin) with a good effect.

Key words : advanced uterine cervical cancer, neoadjuvant combination chemotherapy, taxanes, platinum

Introduction

Uterine cervical cancer is the second most common cancer in women worldwide. Many patients present with early stage disease and subsequent treatment results in a high cure rate ; however, the prognosis of advanced cervical cancer remains poor, with a 5-year relative survival rate for stage 4 of 17%.[1] The treatment of advanced or recurrent cervical cancer has been improved by the introduction of new active chemotherapy agents. Recently, the significant activity of paclitaxel has been shown in gynecological malignancies, such as ovarian and endometrial cancer, and in several squamous cell carcinomas, such as head and neck, lung cancer, and advanced cervical cancers.[2] Another report suggested that the combination of docetaxel and carboplatin is an effective and safe treatment for uterine cervix cancer.[3] Here, we report a patient with advanced uterine cervical cancer (stage 4b) who responded to neoadjuvant combination chemotherapy with taxanes and platinum.

Case report

The patient was a 53-year old woman (gravida 4, para 2), who presented with pollakisuria, lumbago, and pain in the anus and inguinal lesion, without genital bleeding. Her family history and past history were unremarkable. An abnormal smear for uterine cervix was detected, leading to her presentation at our hospital for further examination.

On examination, a huge cervical tumor developing in the vagina was detected and a chest X-ray and chest CT showed the multiple lung metastases (Fig. 1). On MRI, a tumor shadow was detected in the uterine cervix to vagina and metastasis to the left femoral bone was found

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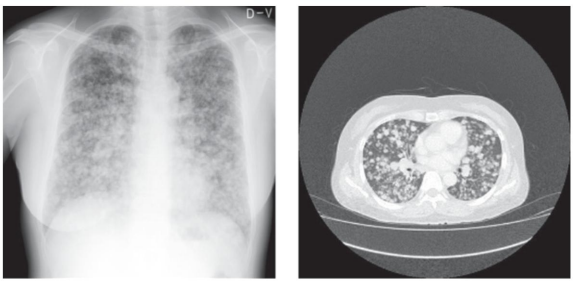

a b

Fig. 1 Multiple lung metastases at the first examination. (a. on chest X-ray ; b. on chest CT)

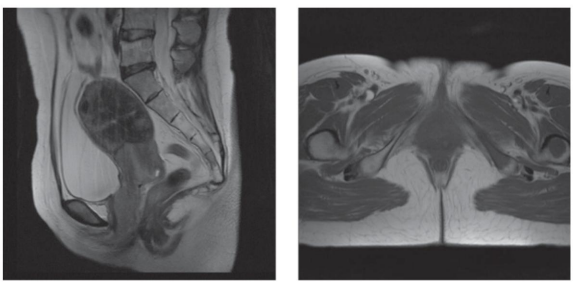

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Fig. 2 A tumor shadow was detected in the uterine cervix to vagina (a) and metastasis to the left femoral bone (b) was found on the first MRI.

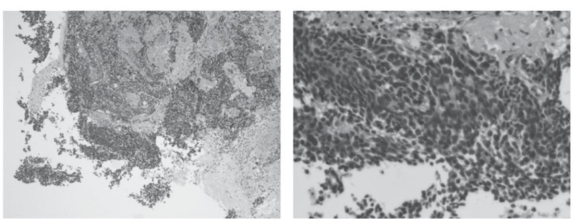

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Fig. 3 Histopathological findings : Biopsy of the tumor in the vagina showed non-keratinizing squamous cell carcinoma. (a. H・E ×100 b. H・E ×400)

(Fig. 2). Biopsy of the tumor in the vagina was diagnostic for squamous cell carcinoma, non-keratinizing (Fig. 3), showing positive for cytokeratin and negative for NSE (neuron-specific enolase) and chromogranin A. These findings indicated a clinical diagnosis of stage 4b disease. Tumor marker levels were as follows : SCC, 0.9 ng/ml ; CEA, 1.3 ng/ml ; CA125, 13.2 U/ml ; CA19-9, 16.7 U/ml ; CA 72-4, 0.9 U/ml. Two days after admission to our hospital, she developed dyspnea requiring to O_2 and severe lumbago requiring morphine. We immediately started chemotherapy to extend her life after obtaining written informed consent. Neoadjuvant combination chemotherapy with paclitaxel (175 mg/m^2) and carboplatin (AUC=5) (TC therapy) was performed and repeated every 28 days because of fewer complications. Three cycles were administered and she was discharged from hospital with decreased symptoms of dyspnea and pain. The tumor volume in the uterine cervix was markedly decreased after 2 cycles of chemotherapy (Fig. 4). She had a hypersensitive reaction to carboplatin after 7 cycles of treatment, so we changed to combination chemotherapy with docetaxel (70 mg/m^2) and cisplatin (60 mg/m^2) (DP therapy), and have performed 7 courses of DP therapy with good effect (Fig. 4 and 5).

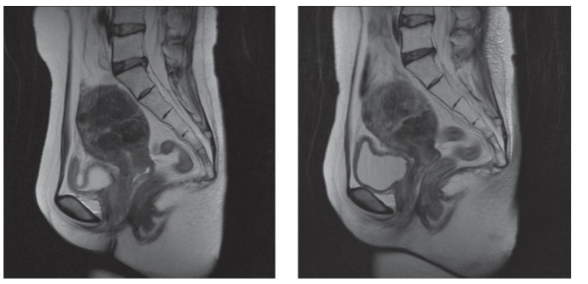

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Fig. 4 Tumor volume in the uterine cervix markedly decreased after chemotherapy on MRI. (a. after 2 cycles of TC ; b. after 7 cycles of TC and 4 cycles of DP)

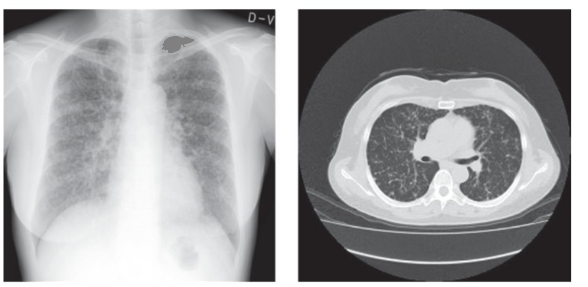

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Fig. 5 The tumor volume in lung metastasis markedly decreased after chemotherapy. (a. on chest X-ray after 7 cycles of TC and 4 cycles of DP ; b. on chest CT after 7 cycles of TC and 7 cycles of DP)

We will evaluate a treatment response by measurement of tumor size on CT or MRI and continue a chemotherapy until the tumor will disappear complately. We will follow up once a month after chemotherapy.

Discussion

The treatment of advanced or recurrent cervical cancer has been improved by the introduction of new active chemotherapy agents, of which cisplatin is considered the most active,

with response rates of 20% to 30%,[4] and it is now routinely employed as part of the initial therapy.[5] Other drugs, such as ifosfamide,[6] topotecan,[7] gemcitabine,[8] and vinorelbine[9] also have documented activity, however, the continued poor prognosis of this patient population stresses the need to identify more effective agents and combination regimens.

Recently, clinical trials of paclitaxel performed on cervical cancer patients have placed this compound in the forefront of the most active drugs against this disease.[10-12] It was demonstrated that combination regimens, paclitaxel plus cisplatin or topotecan plus cisplatin, are superior to cisplatin alone with respect to improvements in the response rate, PFS, and quality of life.[13,14] In patients with advanced squamous cell cervical cancer, a single dose of docetaxel had a 34% clinical response rate.[15] Nagao et al. reported an 80% response rate of neoadjuvant combination chemotherapy of docetaxel and carboplatin in advanced cervical cancer.[3]

In our case, the patient had stage 4b uterine cervical cancer and was in poor condition with multiple lung metastases, and we chose first-line combination chemotherapy with paclitaxel and carboplatin because of fewer complications. We had to change carboplatin due to a hypersensitive reaction and selected combination chemotherapy of docetaxel and cisplatin, expecting a further response due to no change for lung metastasis after 6 cycles of TC therapy. The good prognosis of this case suggested that combination chemotherapy of taxanes and platinum is effective against advanced squamous cell cervical cancer.

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