

Long-term Follow-up of Recurrent Uterine Cervical Cancer: A Case Report

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ABSTRACT

Carcinoma of the uterine cervix is a significant cause of mortality because of malignancy in women. Radiotherapy is a major treatment modality for invasive cervical cancer with good treatment outcome in early-stage patients. However, substantial treatment failures still occur in the advanced-stage patients. In this case report a long term follow up of a 58 years old woman with stage II cervical squamous cell carcinoma (SCC), who was considered inoperable due to her general condition, cardiac poor function and ischemic heart disease (IHD) has been reported. After full dose external radiotherapy the patient became disease free till 6 years and after local recurrence, she was treated successfully with total abdominal hysterectomy (TAH) and bilateralsalpingo-oophorectomy(BSO)as well as adjuvant chemotherapy with favorable results during a long term follow up of 14 years. It is concluded that long term favorable outcome may be achieved by intensive radiotherapy of uterine cervix SCC and probable recurrence could be managed successfully by surgical excision.

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Introduction

Carcinoma of uterine cervix is a significant cause of malignancy-related mortality in women. Recently, concurrent chemoradiotherapy (CCRT) of locally advanced uterine cervix carcinoma has been associated with favorable results and increasing survival rate (1, 2).

Radiotherapy is a major treatment modality for invasive cervical cancer with good treatment outcomes in early-stage patients. However, treatment failure is still quite common in advanced-stage patients.

The best option for the radiotherapy of cervical squamous cell carcinoma (SCC) is a combination of external radiotherapy and brachytherapy (3). Previous studies have shown the failure rate of radiotherapy alone around 30% in stage IB-IIA and IIB SCC of the cervix; it increased to 50% in stage III patients (4, 5). Several risk factors, including advanced stage, bulky tumor size, adenocarcinoma or adenosqu-

amous carcinoma, low hemoglobin level, positive pelvic lymph node metastasis, and high serum SCC antigen (SCC-Ag) level, were found to be associated with poor prognosis in cervix cancer (6-8). Since the site and the extend of relapse greatly varies among patients and the initial high-dose radiotherapy causes some limitations for salvage therapy, the treatments for relapse are generally more individualized than initial treatments (9).

Many of these post-radiation recurrences can be successfully managed by surgical excision. Herein, we report a case of recurrent poorly differentiated cervical SCC and its long-term outcomes after a high-dose external radiotherapy.

Case report

A 58-year-old woman with poorly differentiated cervical SCC in cervical biopsy

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was considered inoperable due to her general condition, poor cardiac function, and ischemic heart disease (IHD). The final pathology report indicated stage II cervical SCC.

The patient received a full dose of 7000 cGY pelvic radiation during 35 sessions of radiotherapy over 8.5 weeks. Post-radiation cervical exams by speculum showed erythema and deformation of the uterus cervix without ulceration. Close follow-up was continued and after a month, vegetation in the external part of the cervix was observed. Pap smear result indicated P1 stage (normal). The patient was closely followed-up and after 2 years, serial pap smears were still in P1 stage and cervical erythema had remained.

Finally, after 6 years, pap smear indicated PIII stage, and biopsy was performed. Pathologic assessments reported invasive differentiated non-keratinizing SCC, and the patient was referred for surgical intervention. After cardiac risk management by pacemaker insertion and medical therapy, total abdominal hysterectomy (TAH) and bilateral salpingo-oophorectomy (BSO) were performed. Pathological studies showed poorly differentiated SCC of the cervix.

The patient was treated by chemotherapy again [SFU (750mg × 3day) and cisplatin (40mg × 3day)]. After 5 months of chemotherapy, systemic evaluations including chest X-ray, sonographic assessment, and vaginal exams were performed. Normal vaginal cuff and rectovaginal septum were also assessed.

All physical exams have been almost normal during the follow-up period until the present time (14 years since the first presentation). Yearly follow-up is continued and suggested for the patient.

Discussion

Today, CCRT is becoming the standard treatment for patients with locally advanced carcinoma of the uterine cervix or the early-stage disease with poor prognostic factors (10–14).

When added to radiation, cisplatin reduces the relative mortality risk of cervical carcinoma by 30–50% through decreasing local/pelvic failure and distant metastases. Chemoradiation showed significant advantages for local and distant recurrences. However, over 50% of

patients with recurrences were found to have distant metastasis after CCRT (15, 16).

Some other studies indicated that most patients with stage IIB tumors were treated with irradiation alone, and the 5-year survival rate was 60% to 65%; also, the pelvic failure rate ranged from 18% to 39%. In case of post-radiation recurrences, patients with limited pelvic recurrences, not fixed to the pelvic wall and without evidence of extrapelvic metastases, could be potentially treated by radical hysterectomy or pelvic exenteration(3).

When irradiation is combined with surgery, the complication rate tends to be somewhat higher, particularly due to injuries to the ureter or bladder (ureteral stricture, and ureterovaginal or vesicovaginal fistulas) (3).

Herein, we reported a long-term follow-up of a patient with poorly differentiated cervical SCC and favorable long-term outcomes after full-dose external radiotherapy. As we observed, the patient was disease-free for 6 years and after local recurrence, she was successfully treated with TAH, BSO, and adjuvant chemotherapy, and showed favorable results during a long-term follow-up of 14 years.

Hong et al. reported that the risk of treatment failure in advanced-stage cervical cancer patients, treated by radiotherapy alone, could be more precisely predicted by risk stratification. Independent risk factors for distant failure were advanced stage, SCC-Ag level > 2, and positive pelvic lymph nodes. The 5-year distant relapse-free survival rate was 83% for patients with bulky stage IB-IIA and IIB disease, SCC-Ag level < 2, and negative lymph nodes; the survival rate was reported 43% for patients with stage III disease, SCC-Ag level > 2, and positive lymph nodes (17).

Hong et al. in another study reported the long-term survival rates of recurrent SCC of the cervix after radiotherapy, isolated paraaortic lymph nodes relapse salvaged by radiotherapy or combined with chemoradiotherapy, and cervical relapse salvaged by surgery. According to the results, early detection of relapse with aggressive salvage treatment was essential for obtaining better outcomes. In addition, patients with persistent disease or relapse after complete remission showed similar results (18).

Conclusion

Long-term favorable outcomes might be achieved by intensive radiotherapy of uterine cervix SCC and probable recurrence could be successfully managed by surgical excision.

Conflict of Interest

The authors declare no conflicts of interest.

References

- Morris M, Eifel PJ, Lu J, Grigsby PW, Levenback C, Stevens RE, et al. Pelvic radiation with concurrent chemotherapy compared with pelvic and para-aortic radiation for high-risk cervical cancer. *New England Journal of Medicine*. 1999;340:1137-1143.
- Cheng X, Cai SM, Li ZT, Wu XH, Ding YQ, Wang XE, et al. Concurrent chemotherapy and adjuvant extended field irradiation after radical surgery for cervical cancer patients with lymph node metastases. *International Journal of Gynecological Cancer*. 2008;18(4):779-784.
- Kavanagh BD. Uterine Cervix. In: Perez C, Brady L. *Clinical radiation oncology*. 5th ed. Philadelphia: Lippincott William and Wilkins; 2008.
- Hong JH, Tsai CS, Chang JT, Wang CC, Lai CH, Lee SP, et al. The prognostic significance of pre- and posttreatment SCC levels in patients with squamous cell carcinoma of the cervix treated by radiotherapy. *International Journal of Radiation OncologyBiologyPhysics*. 1998;41:823-830.
- Hong JH, Tsai CS, Wang CC, Lai CH, Chen WC, Lee SP, et al. Comparison of clinical behaviors and responses to radiation between squamous cell carcinomas and adenocarcinomas/adenosquamous carcinomas of the cervix. *Chang Gung Medical Journal*. 2000;23:396-404.
- Gatcliffe TA, Tewari KS, Shah A, Brewster WR, Burger RA, Kuo JV, et al. A feasibility study of topotecan with standard-dose cisplatin and concurrent primary radiation therapy in locally advanced cervical cancer. *Gynecologic oncology*. 2009;112(1):85-89.
- Hong JH, Chen MS, Lin FJ, Tang SG. Prognostic assessment of tumor regression after external irradiation for cervical cancer. *International Journal of Radiation OncologyBiologyPhysics*. 1992;22:913-917.
- Kato H, Torigoe T. Radioimmunoassay for tumor antigen of human cervical squamous cell carcinoma. *Cancer*. 1977;40:1621-1628.
- Kim YS, Kim JH, Ahn SD, Lee SW, Shin SS, Nam JH, et al. High-dose extended-field irradiation and high-dose-rate brachytherapy with concurrent chemotherapy for cervical cancer with positive para-aortic lymph nodes. *International Journal of Radiation OncologyBiologyPhysics*. 2009;74(5):1522-1528.
- Neunteufel W, Tatra G, Bieglmayer C. Serum squamous cell carcinoma antigen levels in women with neoplasms of the lower genital tract and in healthy controls. *Archives of gynecology and obstetrics*. 1989;246:243-250.
- Brioschi PA, Bischof P, Delafosse C, Krauer F. Squamous-cell carcinoma antigen (SCC-A) values related to clinical outcome of pre-invasive and invasive cervical carcinoma. *International Journal of Cancer*. 1991;47:376-379.
- Scambia G, Panici PB, Baiocchi G, Amoroso M, Foti E, Greggi S, et al. The value of squamous cell carcinoma antigen in patients with locally advanced cervical cancer undergoing neoadjuvant chemotherapy. *International Journal of Gynecology & Obstetrics*. 1991; 36(4), 353.
- Eifel PJ, Winter K, Morris M, Levenback C, Grigsby PW, Cooper J, et al. Pelvic irradiation with concurrent chemotherapy versus pelvic and para-aortic irradiation for high-risk cervical cancer: an update of radiation therapy oncology group trial (RTOG) 90-01. *Journal of Clinical Oncology*. 2004;22(5):872-880.
- Kim YS, Shin SS, Nam JH, Kim YT, Kim YM, Kim JH, et al. Prospective randomized comparison of monthly fluorouracil and cisplatin versus weekly cisplatin concurrent with pelvic radiotherapy and high-dose rate brachytherapy for locally advanced cervical cancer. *Gynecologic oncology*. 2008;108(1):195-200.
- Chung YL, Jian JJ, Cheng SH, Hsieh CI, Tan TD, Chang HJ, et al. Extended-field radiotherapy and high-dose-rate brachytherapy with concurrent and adjuvant cisplatin-based chemotherapy for locally advanced cervical cancer: a phase I/II study. *Gynecologic oncology*. 2005;97(1):126-135.
- Lerouge D, Touboul E, Lefranc JP, Uzan S, Jannet D, Moureau-Zabotto L, et al. Preoperative concurrent radiation therapy and chemotherapy for operable bulky carcinomas of uterine cervix stages IB2, IIA, and IIB with proximal parametrial invasion. *Cancer Radiotherapie: Journal de la SocieteFrancaise de RadiotherapieOncologique*. 2004;8(3):168-177.
- Hong JH, Tsai CS, Lai CH, Chang TC, Wang CC, Chou HH, et al. Risk stratification of patients with advanced squamous cell carcinoma of cervix treated by radiotherapy alone. *International Journal of Radiation Oncology Biology Physics*. 2005;63(2):492-499.
- Hong JH, Tsai CS, Lai CH, Chang TC, Wang CC, Chou HH, et al. Recurrent squamous cell carcinoma of cervix after definitive radiotherapy. *International Journal of Radiation Oncology Biology Physics*. 2004;60(1):249-257.