



SMALL CELL NEUROENDOCRINE CARCINOMA OF THE CERVIX IN A HIV POSITIVE PATIENT: A CASE REPORT

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ABSTRACT

Background: Small cell neuroendocrine carcinoma of the cervix is a rare malignancy with an aggressive behavior, Histopathologically similar to small cell carcinoma of lung. Pelvic recurrence and distant metastasis are very common. In literature, the best treatment modality remains controversial. **Case:** From a case report in HIV positive patient and a literature review, we focus on prognostic factors and treatment of this cancer. **Conclusion:** Patients with small cell neuroendocrine cervical cancer have a poor prognosis. A multimodal treatment approach is required. Small cell carcinoma of the cervix is an aggressive tumor with a propensity for rapid recurrence; it is associated with high mortality.

KEYWORDS: Uterine cervix, small cell carcinoma, neuroendocrine, HPV.

INTRODUCTION

Small cell carcinoma is a type of neuroendocrine cancer that originates in the cells of the neuroendocrine system. It tends to be aggressive and is associated with a less encouraging prognosis, even if it is diagnosed at an early stage. A recent observation allowed us to review the literature concerning this extremely rare entity

CASE

A 48-year-old lady, P3L3 presented in our OPD with the chief complaint of irregular bleeding per vaginum since 4 months. Her past menstrual history was of irregular periods. She was P3L3 with all full-term normal deliveries and her last childbirth was 15 years back. Her husband died 3 years back. There was no history of tuberculosis (TB), thyroid disorder, diabetes mellitus (DM), hypertension (HTN). She was not addicted to smoking. Her vitals were stable. Patient is a known case of HIV and she is on anti-retroviral therapy for last two years. On Per speculum examination there was bleeding and cervix was not visualized. On per vaginal examination, an ulceroproliferative growth of size 4 × 4 cm seen, completely involving the cervix. On per rectal examination, bilateral parametrium was involved but reaching upto pelvic side on right side only. Examination triggered active bleeding from the growth. Histopathological examination revealed closest resemblance to malignant neuroendocrine tumor. Immunohistochemical stains showed positivity for synaptophysin, CD 99, CD 56 and negative for

cytokeratin, chromogranin and cytokeratin 20. Final diagnosis of small cell neuroendocrine carcinoma cervix with FIGO stage IIIB was made. Ultrasonography (USG) pelvis was done and showed bulky heterogenous cervix with neoplastic etiology. Magnetic resonance imaging (MRI) of pelvis (Fig. 1,2 &3) showed a large polypoidal lesion of size 21 x 21 mm in region of cervix involving anterior and posterior lips and extending into the cervical canal. The lesion is further extending into the vagina forming a mass lesion of size 59 x 56 mm. An enlarged lymph node also seen along the external iliac vessel, likely metastatic. Then the patient received 50 Gy whole pelvis radiations with concomitant cisplatin weekly. After external radiotherapy, brachytherapy was administered using the highdose- rate brachytherapy (15 Gy). She tolerated well the treatment with no significant side effects. Two months after the end of the treatment, no recurrence of the disease could be demonstrated. Patient is now on routine follow up.

MRI Pelvis before treatment, showing large polypoidal lesion in region of cervix (Fig 1,2 and 3)

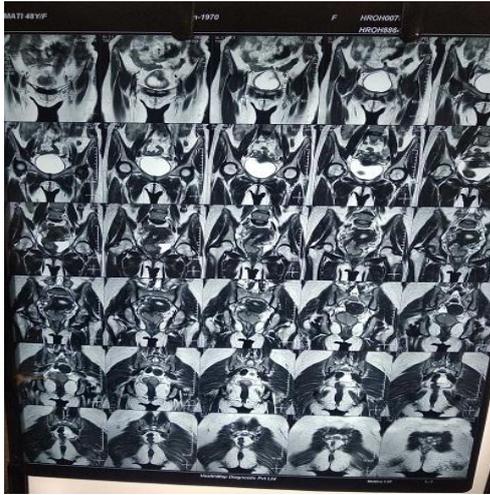


Fig 1.0



Fig 2.0



Fig 3.0

DISCUSSION

Neuroendocrine carcinoma of cervix is a rare neoplasia, comprising of 1-3% of all cervix cancers.^[1-3] Histopathologically, neuroendocrine cervical carcinoma resembles small cell carcinoma of the lung and is classified in neuroendocrine pulmonary tumor published by the World Health Organization. Reports suggest that SCNCC might be strongly associated with high-risk oncogenic HPV. HPV 18 would be a viral type specifically associated with cervical small cell carcinoma,^[4] Neuroendocrine malignant cells develop in the basal layers of the epithelium, preferably in the upper part of the cervical canal. They have the ability to pass the basement membrane while preserving the superficial layers of the epithelium. The Pap smear screening might not be helpful in early diagnosis of SCNCC. Systematic detection of HPV could be a valuable aid in the detection of SCNCC,^[5] The local treatment for small cell cancer of the cervix, as in other cervical cancers, is dependent on the stage and extent of the disease at presentation. Patients with early stage disease have routinely been treated with radical hysterectomy Earlier diagnosis may improve the survival rate of these patients. Patients with more advanced disease are usually treated with radiation therapy alone. Although their overall outcome is poor, results are difficult to compare with results in surgical series because of the more advanced disease in patients treated with radiation. The number of patients and follow-up is insufficient to permit determination of whether chemotherapy can improve the outcome of patients with small cell carcinoma of the cervix.^[6,7] Delalogue et al. reported that only 2 of 10 patients survived after treatment with various combinations of surgery or radiation therapy with chemotherapy.^[6] At M.D. Anderson, 4 of 10 patients were alive without disease 7–60 months after treatment.^[8] Chang et al. reported encouraging results with chemotherapy for this disease.^[9] Hoskins et al. reported encouraging results using concurrent chemoradiation in patients with more advanced disease. The 3-year survival rate for patients with stages I–II, node negative disease was 80%, and the survival rate for patients with more advanced disease was 38%.^[10] It is not yet known whether chemotherapy will be as effective as it has been in patients with small cell lung cancer. At Present, our conventional approach is to treat patients with SCNEC using concurrent chemoradiation followed by several additional cycles of chemotherapy. In our case, the small cell carcinoma of the uterine cervix seems to be a sensitive to chemoradiation. Therefore, chemoradiotherapy can be used as a good treatment option while surgery and adjuvant chemotherapy are thought to control local and regional disease. Despite the retrospective studies and case reports published in literature, the best modality of treatment remains controversial.

REFERENCES

1. Crowder S, Tuller E Small cell carcinoma of the female genital tract. *Semin Oncol*, 2007; 34: 57-63.

2. Delalogue S, Pautier P, Kerbrat P, Castaigne D, Haie-Meder C, et al. Neuroendocrine small cell carcinoma of the uterine cervix: what disease? What treatment? Report of ten cases and a review of the literature. *Clin Oncol (R Coll Radiol)*, 2000; 12: 357-362.
3. Viswanathan AN, Deavers MT, Jhingran A, Ramirez PT, Levenback C, et al. Small cell neuroendocrine carcinoma of the cervix: outcome and patterns of recurrence. *Gynecol Oncol*, 2004; 93: 27-33.
4. Stoler MH, Mills SE, Gersell DJ, Walker AN. Small-cell neuroendocrine carcinoma of the cervix. A human papillomavirus type 18-associated cancer. *Am J Surg Pathol*, 1991; 15: 28-32.
5. Park HJ, Choi YM, Chung CK, Lee SH, Yim GW, et al. Pap smear screening for small cell carcinoma of the uterine cervix: a case series and review of the literature. *J Gynecol Oncol*, 2011; 22: 39-43.
6. Delalogue S, Pautier P, Kerbrat P, Castaigne D, Haie-Meder C, Duvillard P, et al. Neuroendocrine small cell carcinoma of the uterine cervix: what disease? What treatment? Report of ten cases and a review of the literature. *Clin Oncol (R Coll Radiol)*, 2000; 12: 357– 62.
7. O'Hanlan KA, Goldberg GL, Jones JG, Runowicz CD, Ehrlich L, Rodriguez-Rodriguez L. Adjuvant therapy for neuroendocrine small cell carcinoma of the cervix: review of the literature. *Gynecol Oncol*, 1991; 43: 167– 72.
8. Morris M, Gershenson DM, Eifel PJ, Silva EG, Mitchell MF, Burke TW, et al. Treatment of small cell carcinoma of the cervix with cisplatin, doxorubicin, and etoposide. *Gynecol Oncol*, 1992; 47: 62– 5.
9. Chang TC, Lai CH, Tseng CJ, Hsueh S, Huang KG, Chou HH. Prognostic factors in surgically treated small cell cervical carcinoma followed by adjuvant chemotherapy. *Cancer*, 1998; 83: 712– 8.
10. Hoskins PJ, Swenerton KD, Pike JA, Lim P, Aquino-Parsons C, Wong F, et al. Small-cell carcinoma of the cervix: fourteen years of experience at a single institution using a combined-modality regimen of involved-field irradiation and platinum-based combination chemotherapy. *J Clin Oncol*, 2003; 21: 3495–501.