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Basaloid squamous cell carcinoma of the uterine cervix: a rare aggressive variant of cervical malignancy

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ABSTRACT

We describe a rare and interesting case of a basaloid squamous cell carcinoma (BSCC) of the uterine cervix with bilateral pelvic lymph node metastasis. Our case is of particular interest because it is a rare type of neoplasm with high metastatic potential in a very short history of symptoms and early clinical staging.

Keywords: Squamous, carcinoma, biological

Introduction

The term Basaloid squamous cell carcinoma (BSSC) a rare type of carcinoma which was first coined by Wain et al in 1986 to describe a "highly malignant variant of squamous cell carcinoma with a basaloid pattern" originated at tongue , hypolarynx an larynx[1].Since then there have been infrequent case reports describing neoplasms of similar morphology. Commonly involved sites are larynx, hypopharynx, tonsils and base of tongue. Less frequently effected sites are nose, paranasal sinuses, external ear, submandibular region, oesophagus, lung, uterine cervix, vulva, vagina and anus[2,3]. The histological features are at variance to common squamous cell carcinoma of cervix. The biological behavior and metastatic potential is very aggressive in comparison to the common histological variety of squamous cell carcinoma. We present such a rare type carcinoma of cervix in a married woman in her late forties.

Case Report

A 46 year old post menopausal lady was referred from rural area with history of post menopausal bleeding for evaluation. She is a homemaker and had 6 normal deliveries with no significant abnormality in menstrual history during premenopausal age. She had attained menopause at the age of 40 years. She had frequent episode of watery vaginal discharge since young adult age. She had one episode of vaginal bleeding 3 years back which she was evaluated by histopathological examination (HPE) study of endometrial /cervical tissue specimen. The HPE reports were within normal limit. Accordingly she was treated by oral progesterone and haematinics. She experienced few episodes of vaginal bleeding during last two months for which she had attended the GOPD. There was no history of bone pain and cough. She was monogamous in sexual relation, non smoker, and there was no history of exposure to carcinogens. She had occasional post coital bleeding in the past. There was no significant past and family history. Her husband had undergone vasectomy operation and also in monogamous relationship. There was no history of surgical history except undergoing surgery for cataract. As routine cervical screening procedures are not carried out in rural India, she had never under gone any screening test for cervical carcinoma. On evaluation her general condition was normal. Systemic examination was within normal limit. On pelvic examination vulva, vagina and perineum were healthy. There was a very small irregular surfaced 2-3 mm sized altered brown colored lesion in the posterior lip of the cervix. Colposcopic guided biopsy was taken from suspicious site in the cervix. Her hematological and biochemical reports were within normal limit. Imaging by x ray chest were

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normal study. The histopathological report of punch biopsy of the cervix showed large cell keratinizing squamous cell carcinoma of cervix**.**

MRI Imaging of pelvis showed - a well defined, irregularly marginated altered signal intensity mass lesion measuring 25.8x 20.5x 23.3 mm involving endometrium in the lower uterine segment with extension of the cervix. There is less than <50% myometrial invasion seen with stretching of myometrium. There is extension into the cervical canal with interruption of hypointense stromal ring. The lesion is isointense on T1W1, mildly hyper intense on T2W1. The dynamic post contrast imaging of the lesion shows poor contrast enhancement compared to myometrium in early phases with avid enhancement in the delayed phases. There is minimal dilatation of the endometrial cavity in the body and fundal region. Other adjacent areas bladder, rectaum , fat planes , adnexae , POD were normal. Clinically she was diagnosed as carcinoma cervix stage 1 B 1, she had undergone Wertheim's radical hysterectomy with bilateral salpingo-ophorectomy and excision of bilateral pelvic nodes under combined epidural and general anesthesia. She was managed post operatively by antibiotics, epidural analgesia and Inj LMWH followed by early ambulation and post operative physiotherapy.

The gross specimen

Specimen on cut section showed an ill defined ulcerative growth measuring 1x1x1 cm near upper part of endocervical canal extending into lower uterine segment. External surface of the uterus was congested. Bilateral ovaries and fallopian tubes were healthy looking.

Cervical histopathology report biopsy no B/5019/2014 dated 30/12/14.

Microscopic finding was

1. Histology type of tumour: Squamous cell carcinoma , basaloid variant.
2. Histologic grade: G2, Moderately differentiated .
3. Margins: Anterior and posterior shave margins, right and left parametrium are tumour free.
4. Lymph – vascular invasion : present , bilateral pelvic lymph nodes show presence of tumour metastasis
5. Endometrium: sections from endometrium show presence of tumour.
6. Bilateral ovaries and fallopian tubes are tumour free.
7. Additional pathologic findings =high grade sqoumous intra epithelial lesion (HSIL) in cervix.
8. TNM classification of FIGO Staging: P T1 B1N1 (Stage [1 B1]
9. Opinion: Squamous cell carcinoma, basaloid variant P T1 B1 N 1 Stage 1 B 1.

Her post operative recovery was smooth and uneventful. In view of her lymph –vascular involvement she is undergoing post operative radiotherapy.

Discussion

Cervical cancer consists of a heterogenous group of large variety of malignancies having different histological as well as biological behavior. Basaloid squamous cell carcinoma (BSSC) is regarded as a rare and aggressive variant of squamous cell carcinoma usually effecting patients in their late 60's and 70's, though there are occasional reports mentioning younger patients[2,4]. Our patient was comparatively young being only 46 years old. Although smoking is supposed to have a strong association with this tumor but this patient had no history of tobacco addiction[2,5,6].Human papilloma virus (type 16, 18), has long been associated with typical squamous cell carcinoma as well its basaloid and warty variants[7,8]. Biologically the basaloid squamous carcinoma of the uterine cervix is an ulcerated, infiltrating growth pattern with nests or cords of small basaloid cells; having prominent peripheral palisading of cells in the tumor cell nests; and the absence of significant stromal reaction. It is mainly composed of immature basaloid squamous cells with scanty cytoplasm. Keratinization foci are seen in the center of the nests. These tumors can arise from various anatomic sites, including the hypopharynx, base of the tongue, salivary glands, esophagus, anal canal, prostate, thymus, vulva, and urinary bladder [9-20]. But uterine cervix is rare and uncommon site. Basaloid squamous carcinoma of the uterine cervix is neither recognized nor included as a specific histologic subtype in the current World Health Organization (WHO) classification of cervical tumors.

The major differential diagnosis of basaloid SCC includes the solid variant of adenoid cystic carcinoma (ACC), small cell carcinoma, and large cell neuroendocrine carcinoma (LC NEC) of the cervix .Since basaloid squamous carcinomas are thought to behave aggressively This case was associated with areas of high grade cervical dysplasia of overlying epithelium. This finding has also been

reported before.A rare and interesting case of a basaloid squamous cell carcinoma (BSC) of the uterine cervix with metastasis in the left iliac region diagnosed by fine needle aspiration (FNA) in a 54-year-old woman who underwent FNA because of a mass in the left iliac region with a history of total hysterectomy almost 15 years before[21]. Another 70-yr-old woman with diabetes whose mother died of uterine cervical cancer had been evaluated for cervical ulcer. The biopsy specimen showed histological evidence of a high grade malignant epithelial tumor, with features unusual for a cervical tumor. She therefore underwent a loop electrosurgical excision procedure (LEEP) cone biopsy, which revealed a basaloid squamous cell carcinoma. Subsequently she underwent radical hysterectomy. There was no evidence of tumor in sections taken from lymph nodes. The resection margin of the vaginal cuff was clear. She was kept in follow up and shown no evidence of recurrence or metastatic disease[22]. A 45 year old monogamous smoker female, wife of polygamous man had symptoms of irregular bleeding per vaginum for 6 months and preceeded by whitish vaginal discharge for 10 years. The cervical specimen showed basaloid squamous cell carcinoma.The lack of standard diagnostic criteria for pure basaloid squamous cell carcinoma of the uterine cervix has made it difficult to predict their precise biologic behavior and to design optimal management strategies. Accumulation of data on these rare tumors is therefore necessary to determine whether their behavior differs significantly from that of conventional cervical (squamous cell carcinoma) SCCs of similar clinical stage. The histopathologic report of cervical punch.Cervical cancer is the commonest genital cancer in females of developing countries but no effective structured screening programme exist in these countries. The causative agent of cervical cancer is high risk HPV infection which is sexually transmitted. Thus modification of sexual behavior, regular mass screening of population along with vaccination against the HPV may reduce the incidence of cervical cancer.

Conclusion

A rare type of cervical cancer presented that is metastasizing to pelvic lymph nodal in a clinically early FIGO of stage 1 B1is p. She had a very short clinical history of post menopausal bleeding. The biological behavior of the tumor is enigmatic due to its rarity. Long-term follow-up of the patient and other such patients is therefore important.

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