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Oncology

KEY WORDS: synchronous primary of uterus, concomitant malignancy, carcinoma uterus and carcinoma cervix

Synchronous Primary Neoplasm In Uterus and Cervix : A Rare Case Report

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ABSTRACT

Synchronous primary malignant neoplasms of the uterus are rare and those of cervix and uterus are even rarer. Thus the treatment is still uncertain.Here we report a case of synchronous primary of carcinoma cervix and carcinoma uterus in a 52 year old lady presenting with abnormal vaginal bleeding. Due to early stage at detection, a radical treatment of surgery followed by adjuvant radiotherapy was undertaken. A review of the pathogenesis of multiple primary malignancies of genital tract is also provided.

Introduction – Synchronous multiple malignant neoplasms of female genital tract are rare. Though the diagnosis of metastatic concomitant masses in the genital tract is common, appearance of two different gynaecological malignancies as primary tumors is rare. Out of all such cases, most belong to concomitant primaries of endometrium and ovary. However, the presence of two different synchronous primaries within the uterus is uncommon. We report a case of 52 year old female patient, presenting with the squamous cell carcinoma cervix and endometroid adenocarcinoma, uterus simultaneously and discuss its treatment .

Case presentation - A 52 year obese female patient presented with the complaints of postmenopausal bleeding and occasional colicky abdominal pain since 3 months. She attained menopause 3 years back. General examination and examination of breasts was normal. Per abdominal examination was unremarkable. On per speculum examination, cervix & vagina was apparently healthy. Cervix appeared bulky on per-vaginal palpation. Biopsy from endometrium was suggestive of moderately differentiated endometrial adenocarcinoma. Pap smear from cervix was suggestive of poorly differentiated carcinoma. All routine laboratory investigations came out to be normal, except a raised random blood sugar. Further testing revealed abnormal fasting and postprandial blood sugar levels and the patient was started on oral hypoglycemic agents. On Ultrasonography, endometrium appeared thickened and hypoechoic with mild collection. CT scan of Abdomen & Pelvis revealed that the uterus appear bulky with heterogeneous echotexture with irregular margin of endometrial cavity. The endometrial thickness at fundal region was 11mm. Obliteration of endomyometrial interface is noted. The size of uterus was 55*69*87mm .The cervix appear bulky with heterogenous echotexture and size was 44*29*31mm. A single necrotic node was present in left external iliac node and size was 17*16mm. Patient underwent staging laparotomy followed by transabdominal hysterectomy, bilateral salpingo-oophorectomy, omental sampling, bilateral pelvic node dissection and peritoneal cytology. On histopathological gross examination, a proliferative growth was identified involving anterior and posterior wall of the uterus measuring 2.2 × 2.0 × 1.0 cm having grey white firm smooth cut surface. Growth involved less than half thickness of myometrial wall and extended to involve lower uterine segment. A grey white area was identified in cervix measuring 1.5 × 1.0 × 0.7 cm. Uterine cavity was 5.0 cm and cervical canal was 2.2 cm in length. Bilateral ovaries and fallopian tubes were unremarkable. Bilateral pelvic lymph nodes were identified having grey white firm smooth cut surface. Microscopic examination showed a well differentiated endometroid adenocarcinoma involving body of uterus with histological grade 2 and tumor measured 2.2 ×2.0 × 1.0 cms. Lymphovascular permeation was not seen. Lymphocytic stromal response was seen. Extensive squamous metaplasia was seen. Tumor infiltrated less than half thickness of myometrium. Tumor extended to involve the lower uterine segment. Poorly differentiated squamous cell carcinoma was also evident involving cervix with the growth measuring 1.5 × 1.0 × 0.7 cms and infiltrating 3/4th thickness of cervical wall. Lymphovascular invasion and perineural invasion was seen. Bilateral adnexa were found to be free. All 22 dissected pelvic lymphnodes were free of tumor (13 nodes on the right side and 9 on left side). Omental biopsy and peritoneal cytology were negative.

Immunohistochemistry marker for uterus were CK7,CK20,CK5/6 and P63 were negative and CEA,AE1,ER and PR were positive and for cervix, CK7 and CK20 were negative and CK5/6 and CEA were positive in many cells.Cervix aslo showed that vimentin is focally positive,AE1 positive and hormonal receptors ER-and PR negative of this specimen suggested two synchronous involving body of uterus and second primary was poorly differentiated squamous cell carcinoma of cervix.The two tumours were staged according to TNM classification as pT1aN0M0 for uterus and pT1b1N0M0 for cervix. In view of deep cervical stromal invasion, the patient was started on postoperative adjuvant radiotherapy to a total dose of 50Gy at 2 Gy per fraction external therapy followed by 13Gy by brachytherapy in 2 fractions at 6.5Gy each to boost whole vagina and vaginal vault. Figure 1 & 2 show the preoperative CT scan abdomen and pelvis showing the tumor mass. Figure 3and 4 show the histopathological picture.

Discussion

Multiple primary gynaceological cancers are relatively less common. Genital tract accounts for 1-6 % of all the synchronous primary malignancies .The most common synchronous primary malignancy is that of carcinoma endometrium and carcinoma ovary, probably due to their similar risk factors and pathogenesis. [1,2]. A Study done by Eisner et al showed that 0.7% of all the genital cancers were synchronous primary, the most common being carcinoma endometrium and carcinoma ovary followed by carcinoma uterus and cervix[2]. A study done by Ohel et al showed that the incidence of 2.5% and 0.4% of primary ovarian and cervical malignancies respectively, were associated with endometrial cancer. [3]. In a separate study by Axelrod[4], they found increased incidence of primary malignancy of cervix, ovary , breast, fallopian tube and colon in known case of carcinoma endometrium. There are certain postulates regarding the etiology and pathogenesis of the development of synchronous primaries. One states that embryologically similar tissues when subjected to irritants simultaneously, develop synchronous primaries [3,5]. Others are of the view that multifocal lesions are a result of metaplasia occurring in histologically similar tissues[5].The prognosis and survival of the synchronous primaries depend on the stage of the disease of either of the two tumours at the time of presentation[4].

Presenting symptoms of endometrial carcinoma include postmenopausal bleeding, abnormal vaginal discharge and abdominal pain. The complaints and detailed history in this patient pointed towards the differential diagnosis being carcinoma endometrial more likely than carcinoma cervix. But the Pap smear was positive for squamous cell carcinoma. Based on surgical and pathological findings, it was ascertained that these are two different histoptahological tumors, seperated minimally and not the extention of carcinoma cervix into body uterus.

Conclusion –The occurrence of synchronous primary lesions in genital tract is a rare occurrence and we report a case of simultaneous existence of carcinoma cervix and carcinoma endometrium with their distinct histopathological sites. Both the tumours have their distinct clinopathological attributes and line of management, but can occur simultaneously as an incidental finding.

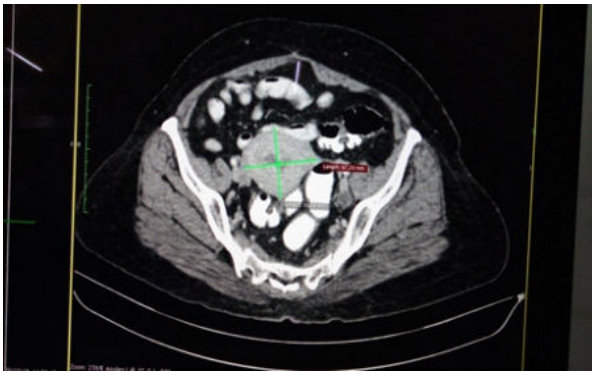
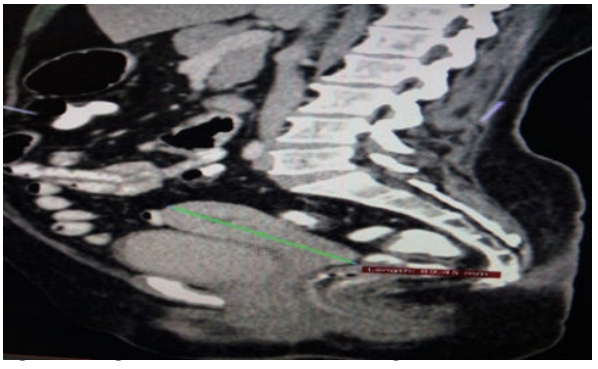


Figure 1 – Axial CT scan showing the utero-cervical mass



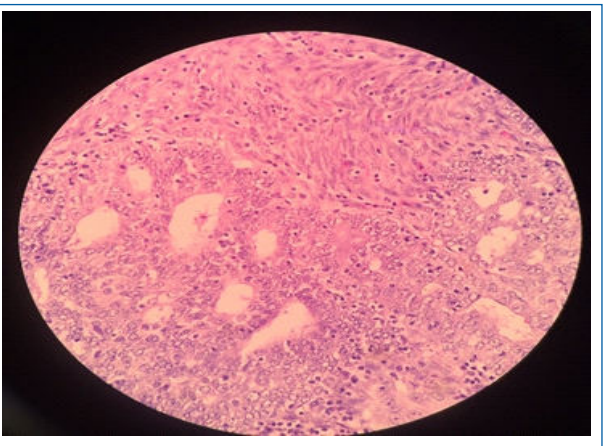


Figure 3- 40x light microscopic view of adenocarcinoma of cervix showing well defined gland formation

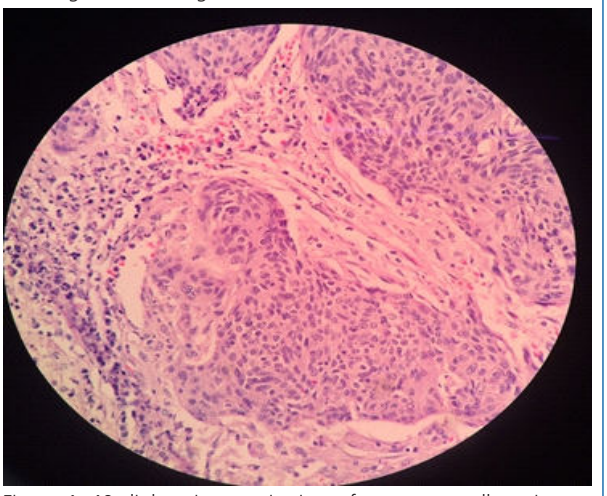


Figure 4- 40x light microscopic view of squamous cell carcinoma cervix showing solid sheets and nest of tumour cells

References –

[1] Lin CK, Yu MH, Chu TW, Lai HC. Synchronous occurrence of primary neoplasms of the uterus with squamous cell carcinoma of the cervix and adenocarcinoma of the endometrium. Taiwan J Obstet Gynecol 2006;45: 336-9.

[2] Eisner RF, Nieberg RK, Berek JS. Synchronous primary neoplasms of the female reproductive tract. Gynecol Oncol 1989;33:335-9.

[3] Ohel G, Schwartz Z, Birkenfeld A, Anteby SO, Schenker JG. Second primary genital malignancies associated with endometrial cancer. Arch Gynecol 1986;239:75-80.

[4] Axelrod JH, Fruchter R, Boyce JG. Multiple primaries among gynecologic malignancies. Gynecol Oncol 1984;18:359–72

[5]. Woodruff JD, Solomon D, Sullivant H. Multifocal disease in the upper genital canal. Obstet Gynecol 1985;65:695–8.