ABSTRACT

Endometriosis is a common gynecologic problem. Malignant transformation of endometriosis, though a rare event, is well documented. Synchronous endometrial and ovarian carcinoma either primary or metastatic is also uncommon. Here we report a case of endometriosis with concurrent ovarian and uterine endometroid carcinoma.

KEY WORDS: Endometriosis, Malignant Transformation, Endometrioid Carcinoma, Synchronous Carcinoma

INTRODUCTION

Endometriosis is one of the most common gynecological disorder. The incidence in Pakistani women is 6%. While the incidence of malignant transformation is about 1% especially when it is ovarian in origin. The risk of ovarian endometroid cancer increases among patients with a long history of ovarian endometrioma. Ovarian endometroid carcinoma and endometrial carcinoma can present as synchronous ovarian and endometrial primary carcinoma or ovarian metastasis to endometrium and vice versa.

Here we report a case of ovarian endometroid carcinoma with associated endometriosis and coexistent well differentiated endometroid carcinoma of the uterus.

CASE REPORT

Fifty years old female presented with abnormal uterine bleeding. On investigation her uterus was enlarged and a solid mass was present in one of the ovaries. She underwent total abdominal hysterectomy with bilateral salpingoophrectomy. The specimen received in the laboratory consisted of uterus with cervix measuring 8x6x5cm, ovaries 3x3 and 2x2 cm each and tubes, each measuring 5x0.5cm. A white, necrotic growth was present in the uterine cavity measuring 4x3cm, extending 0.5cm into the uterine wall. One ovary contained white, necrotic growth while the other had small cysts (Fig-1). A piece of omentum measuring 4x3x0.5cm was unremarkable on cut section. A well differentiated endometroid carcinoma was diagnosed in the uterus and right ovary (Fig-2, 3), along with right ovarian endometriosis (Fig-4). Adenomyosis was present in the uterus. The tumor in the ovary and uterus were histologically similar. Both consisted of well differentiated back to back neoplastic glands, scant stroma, invasion and squamous nests. Uterine tumor involved less than 1/3rd of the myometrium. Sections from fallopian tubes and omentum were unremarkable. The case was diagnosed as

- Endometroid carcinoma Rt. ovary (well differentiated)
- Rt. Ovarian endometriosis
- Endometroid carcinoma uterus (well differentiated) involving less than 1/3rd of myometrium

FIGO Stage: Ovarian carcinoma T1, Uterine carcinoma T1b

FIGURE - 1: UTERUS WITH WHITE NECROTIC GROWTH & OVARY WITH SOLID WHITE TUMOR

FIGURE - 2: UTERUS: ENDOMETROID CARCINOMA, BACK TO BACK WELL DIFFERENTIATED GLANDS WITH SQUAMOUS NESTS (10X)

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the endometrium. There are significant implications in regard to therapy and prognosis.

Ulbright and Roth et al, proposed pathologic criteria for differentiation between primary and metastatic ovarian carcinoma in 1985 which was further elaborated by Scully et al (Table I & II). Features supporting a primary uterine carcinoma includes either a multinodular ovarian pattern (major criterion) or two or more of the following minor criteria:

- Small (less than 5 cm) ovary (ies),
- Bilateral ovarian involvement,
- Deep myometrial invasion, vascular invasion
- Tubal lumen involvement.

Synchronous lesions are favored when the endometrial carcinoma is minimally invasive and small. An endometrial primary with metastasis to the ovary is most likely when synchronous lesions are favored when the endometrial carcinoma is minimally invasive and small. An endometrial primary with metastasis to the ovary is most likely when synchronous lesions are favored when the endometrial carcinoma is minimally invasive and small. An endometrial primary with metastasis to the ovary is most likely when synchronous lesions are favored when the endometrial carcinoma is minimally invasive and small. An endometrial primary with metastasis to the ovary is most likely when synchronous lesions are favored when the endometrial carcinoma is minimally invasive and small. An endometrial primary with metastasis to the ovary is most likely when synchronous lesions are favored when the endometrial carcinoma is minimally invasive and small. 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observations we assume that the carcinogenic process which led to cancer formation in the ovary from endometriosis, also affected the endometrial glands of the uterus leading to carcinoma. According to theory of secondary Mullerian system the epithelium of female genital tract and peritoneal surface have shared molecular receptors responding to carcinogenic stimulus leading to the development of multiple primary malignancies synchronously.19

Early stage and low histologic grade are also the characteristics of synchronous endometrial and ovarian tumors, especially in subtype of endometrioid histology, the prognosis of synchronous tumors is better than metastatic lesions.16,17 in our case both the ovarian and the uterine tumor were histologically low grade and low stage.

Along with the above mentioned gross and histologic criteria, other special techniques can be used to differentiate metastases from primary lesions.15,17 Concomitant tumors with exactly the same morphology arising in ovary and endometrium, especially the endometrioid carcinoma, will show the same immunohistochemical expression patterns.18 But Halperin et al reported that 62.5% of synchronous primary endometrial and ovarian cancers can be classified by detection of ER and PR content and that 31.3% of synchronous primary endometrial and ovarian cancers can be detected by detecting Bcl-2, which is positive in uterine cancer metastatic to ovary.19 Molecular profiling in synchronous endometroid and ovarian cancers may aid in determining a differential diagnosis.14-17 A recent investigation of loss of heterozygosity suggested that a higher rate of loss of heterozygosity was detected in patients with synchronous lesions than in patients with single tumors.20 Somatic mutations of the β-catenin and PTEN genes are the most common genetic abnormalities identified in ovarian endometroid carcinomas. Compared with uterine endometroid carcinoma, ovarian endometroid carcinoma have a similar frequency of β-catenin abnormalities but lower rate of microsatellite instability and PTEN alterations.20,21

**CONCLUSION**

Synchronous ovarian and uterine cancer is very rare presentation. Careful gross and microscopic examinations can aid to differentiate and identify synchronous ovarian and uterine cancer in a patient. Axillary studies can also add to the diagnosis. This workup has significance in patient care and therapy as well as identifying deeper aspects of tumorigenesis in such cases.

**REFERENCES**

