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Original Research Article

Type II endometrial cancers: original research on a series

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ABSTRACT

Background: Endometrial carcinoma, which ranks 3rd in India amongst the gynecological malignancies, is of two histological types: I and II. These differ in molecular as well as in clinical and histopathological profiles. Type II is estrogen independent, nonendometrioid, with higher grade histologies, more aggressive and carries an adverse prognosis.
Methods: Endometrial carcinomas diagnosed from endometrial biopsies and hysterectomy specimens in the Dept of Gynaec-oncology, AHRCC, Cuttack from November 2009 to January 2015 were included in the study. All specimens were fixed in 10% neutral buffered formalin and paraffin embedded for histological examination with hematoxylin and eosin staining. The clinicopathological analysis of the cases of EC was done with an emphasis on morphology.
Results: Of a total of 150 cases of EC reported, 20 cases were classified as type II EC (13.33%) as per histology. The age of the patients ranged from 36 to 73 years, with mean age is 61 years. In 11 cases (55%), the myometrial invasion was more than half. the histological type was a clear cell adenocarcinoma in 50% of the cases. All were treated with hysterectomy and chemotherapy.
Conclusions: Of the type II EC, serous carcinoma is the most common type. Clinical presentation and prognosis differs in comparison to type I EC, thus the recognition of this type of EC is pivotal.

Keywords: Clear cell adenocarcinoma, Estrogen independent, Gynecological malignancies, Type II endometrial cancer

INTRODUCTION

Endometrial carcinoma, the 3rd commonest gynecological malignancy in india, is usually of two distinct histological groups – type I and type II.[1,2]

These differ in clinical and histopathological profiles. Type II is nonestrogen dependent, nonendometrioid, with a poor prognosis.[3,4]

They ususlly present at an advanced age and contribute to about 10% of the cases of endometrial carcinoma, but the recurrence rate is almost 50%.[5]

METHODS

The patients enrolled in this were those patients who attended the Gynaecological oncology OPD of Acharya Harihar regional cancer centre from NOV 2009 to JAN 2015. Endometrial carcinoma was diagnosed from endometrial biopsies and hysterectomy specimens. All specimens were fixed in 10% neutral buffered formalin and paraffin embedded for histological examination with hematoxylin and eosin staining.

The clinicopathological analysis of the cases of EC was done with emphasis on morphology and the results were analysed.

RESULTS

During the study period, a total of 150 cases of EC were reported. Out of these, 20 cases were classified as type II EC (13.33%) as per histology. The age of the patients ranged from 36 to 73 years, with mean age being 61 years.

The clinical presentation was- postmenopausal bleeding in 80% of the cases, menorrhagia in 5% and metrorrhagia in 5%, abdominal mass in 5%. All of them underwent surgery. CSS was done for 14 cases (70%), TAH+BSO for 3 (15%) cases out of which 2 presented with distance metastasis.

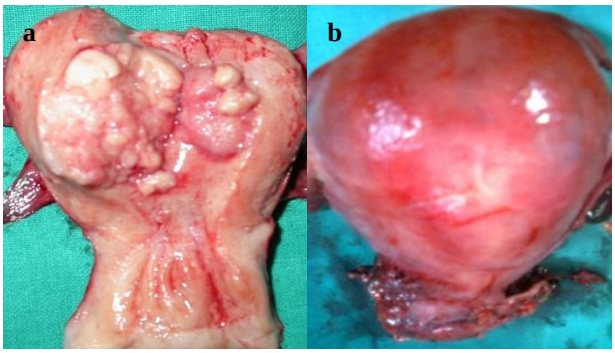

Figure 1: Gross appearance of the specimen and Cavity filled with polypoid growth on cut section.

Figure 2: Polypoidal growth at fundus on cut section of the specimen.

Modified radical hysterectomy was done for 3 (15%) cases and they were followed by chemotherapy 6 cases (30%)/radiotherapy 3 cases (15%). Nodal status showed that 15% had pelvic lymph node +ve, 20% had paraaortic lymph node +ve and 10% cases had distance metastasis. While 70% of the cases were followed up for one year, 10% of the cases were followed up to one year 20% cases were lost to follow up. There was a 10% recurrence of disease treated by brachytherapy.

Gross

The type II EC frequently appeared bulky on a background of an atrophic endometrium, with tumor filling almost the entire cavity (Figure 1 a and b). Myometrial invasion was more than half for 11 cases (55%) less than 50% in 6 cases (30%) (Figure 2). There was distance metastasis in 2 cases (10%) and no myoinvasion in 1 case (5%). Hisopathological study showed that 50% of the cases were clear cell adenocarcinoma, 355 were UPSC and 15 % of the cases were adenocarcinoma.

DISCUSSION

Type II endometrial carcinomas are not related to estrogen and are the nonendometrioid types. They usually arise in the setting of endometrial atrophy, and usually occur in women a decade later than type I carcinoma. Serouc carcinoma is the most common type II endometrial carcinoma and these have higher case-fatality rate than their more common endometrioid counterparts.[6]

The prognosis is largely influenced by the patient's age at the time of diagnosis.[7] Generally, premenopausal endometrial carcinoma is associated with a 5-year survival approaching 100%.[8]

In our series, the mean age was 61 years, and the histomorphological features were of high grade (poorly differentiated). Out of the 150 cases of EC reported during the study period, 7 were serous carcinoma and 10 were clear cell carcinoma and 3 were adenosquamous. This showed that clear cell carcinomas were the most common type of type II ECs. Uterine bleeding in the postmenopausal woman was the major presenting feature.

Myoinvasion, described by the presence of irregular, jagged contours of the neoplastic glands, single tumor cells or clusters in the myometrium, desmoplastic stroma and haphazard distribution of neoplastic glands in myometrium is an important histological finding.[9] Once myoinvasion is established, the depth of invasion is measured using the deepest undulation of endomyometrial junction.

Patients with more than 50% myometrial thickness invasion are at increased risk for extrauterine metastases, including pelvic and para-aortic lymph node metastases. These patients often require pelvic and para-aortic lymphadenectomy, as well as postoperative adjunctive therapy.[10]

In present findings, seven of the cases (55%) had more than half of myometrial thickness invasion. Two of the cases had distant metastases to the liver. Postoperative chemotherapy was given additionally to the cases with distant metastases. Our case series shows that the incidence of type II EC is less than that of type I.

Among the type II EC, serous carcinomas are higher in number. The aggressiveness and the poorer survival rates of type II EC makes the diagnosis of this type very crucial for the histopathologist and the clinician.

Table 1: Staging (FIGO 2009, surgico-pathological).

Age	Nature of specimen	Diagnosis	Stage / Grade	Gross features	Myometrial invasion	Follow up
65	Modified radical hysterectomy +BSO	UPSC	IIIC2, N1MO	Necrotic growth. extension to cervix	>50%	CT, 1yr, NED
50	CSS	Clear cell	IB,G 3	Cavity filled with polypoid growth.	>50%	2yr, NED
54	CSS	UPSC	IB,G1	Thickened endomerium	>50%	1yr, NED
60	CSS	Clear cell	IIIC1, N1MO	Polypoidal growth at fundus	<50%	RT,1yr NED
67	CSS	Clear cell	IIIC2, N1M0	Cavity filled with growth	>50%	CT,1yr NED
68	CSS	Clear cell	I A,G3	Growth filling the entire cavity	<50%	2yr, NED, Recur (Rx brachy) THN 1yr NED
51	CSS	Clear cell	IA,G3	UT size 10WK,3 luminal growth	No invasion	
64	CSS	Clear cell	IIIC1 N1M0	Growth filling endo cavity	>50%	RT,1yr NED
46	CSS	UPSC	IA,G3	Soft friable growth in cavity	<50%	
70	TAH+BSO, Omentectomy	Clear cell	IVB, N1M1	5*4 CM mass in cavity	>50%	CT
65	TAH+BSO	UPSC	IVB, N1M1	Growth filling cavity	>50%	CT
61	Modified radical hysterectomy	UPSC	II,G2	Growth invades CX	<50%	1yr, NED
50	TAH+BSO	Clear cell	IIG3	Growth filling cavity	>50%	1yr, NED
53	CSS	Adenosquamous	IB, G3	Growth filling cavity	>50%	2yr, THN REC-RT
40	CSS	Adenosquamous	IA, G2	Growth filling cavity	<50%	1yr, NED
58	CSS	Clear cell	IIIC2, N1M0	Growth filling cavity	>50%	RT,1yr, NED
73	CSS	UPSC	IB,G3	Growth filling cavity	>50%	1yr NED
52	CSS	adenosquamous	IIIC1 N1M0	2 polypoidal growth in cavity	<50%	RT, 2yr, NED
65	Modified radical hysterctomy	Clear cell	II, N0M0	Fluid in cavity, growth towards CX	>50%	1yr, NED
36	CSS	UPSC	IIIC2, N1M0	Extensive growth in cavity involving vagina	>50%	CT, 2yr NED

CONCLUSION

This study series shows that the incidence of type II EC is less than that of type I. Among the type II Endometrial cancers, the histological type was mainly clear cell carcinomas. The diagnosis of this entity is important due to the aggressiveness and the poorer survival rates of type II EC. Early and accurate diagnosis and proper post-surgical evaluation and treatment is mandatory.

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