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To study the endometrial cancers in tertiary care hospital- A 03 years retrospective study

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Abstract

Introduction: Endometrial cancers (EC) are the most common gynecological malignancies. It can be classified into two groups- type 1 and type 2, based on histology. Type 1 is estrogen dependent whereas types 2 are estrogen independent and are more aggressive. The aim of study is to study the histological type and other clinico pathological parameters of Endometrial carcinoma (E.C)

Material and methods: A 3 Year retrospective study done in department of pathology, of Acharya Sri Cander College of Medical Sciences And Research. 25 cases were taken in this study. All specimens were subjected to routine processing and h&e staining.

Results: A total of 25 cases of EC were included in the study. Most of the patients were above 50 years (80%) and post-menopausal. Majority of the cases were type1 EC (72%) and most common histological type of EC was Endometrioid (72%) followed by serous (16%), followed by carcinosarcoma (8%) and clear cell carcinoma (4%). Myometrial invasion is found in all cases of type 2 EC. In type 2 EC, carcinosarcoma was noted to have higher association with nodal metastasis and Lympovascular invasion compare to type 1 EC.

Conclusion: Type 1 EC was the most frequent subtype of endometrial carcinoma.Of thetype 2 EC, serous is the most common type. Type 2 was significantly associated with nodal metastasis, Lympo vascular invasion and adenexal involvement, signifying the poor prognostic significance of this group of EC.

Keywords: Endometrial carcinoma, endometrioid carcinoma, serous carcinoma, clear cell carcinoma, carcinosarcoma, type 1 endometrial carcinoma, type 2 endometrial carcinoma

Introduction

Endometrial cancer is the most common gynecological malignancy in developed countries [1]. It ranks 3rd in India amongst the gynecological malignancies [2]. It affects women in the peri- and post-menopausal years with peak incidence of 50-65 years [3]. The median age of patients at the time of diagnosis of endometrial carcinoma is 63 years [4]. However, it can occur in any age group and has also been reported in association with intrauterine pregnancy [5].

Post-menopausal bleeding is the commonest presenting complaint of patients with endometrial cancer. It is seen in about 90% of women with endometrial cancer and may be the only presenting complaint in some women [6]. Endometrial cancers are of two types, type1 and 2. Type 1 is estrogen related endometrioid carcinoma divided into subtypes, adenocarcinoma with squamous differentiation further subdivided into adenocarcinoma with squamous metaplasia (adenoacanthoma), adenosquamous carcinoma, secretory, ciliated and villoglandular variants [7]. Type 2 is non estrogen related, non-endometrioid carcinoma and includes uterine papillary serous carcinoma (UPSC), clear cell carcinoma, mucinous and squamous cell carcinoma [8].

Endometrial carcinoma has prognosis that is considerably better than that of other Gynecollogical malignancies because of early presentation to hospital, diagnosis and treatment.

Materials and methods

We retrospectively analyzed 25 cases of endometrial carcinoma over period of 3 years in Acharya Shri Chander College of Medical Sciences and Hospital in the department of Pathology. Cases with unequivocal diagnosis of endometrial carcinomas were included in the study. Cases with post neo-adjuvant chemoradiation or secondary malignancies were excluded from the study. All specimens were fixed in 10% neutral buffered formalin and paraffin embedded for histological examination with hematoxylin and eosin staining. Histological diagnosis was based on standard reference book.

Results

A total of 25 cases of EC were included in the study. The mean age was 61.9 ±10 years. Most of the patients were above 50 years (80%) and post-menopausal.

Majority of the cases were type1 EC (72%) and most common histological type of EC was Endometrioid (72%) followed by serous (16%), followed by carcino sarcoma (8%) and clear cell carcinoma (4%). In type 2, serous type as the most common. 48% of the endometrial tumors were well differentiated, 36% were moderately differentiated and 16% were poorly differentiated.

It was found that majority of type 1 EC were diagnosed in stage I also 8% of type 2 EC were noted to have T Stage T3/T4, compared to 4% of type1 EC. Myometrial invasion was found in all cases of type 2 EC. In type 2 EC, carcinosarcoma was noted to have higher association with nodal metastasis and Lympo vascular

invasion compare to type 1 EC. Nodal metastasis was found in 3 cases of endometrial tumors, out of which 1 case was of type 1 EC and 2 cases were type 2 E.C, thus type 2 EC were more associated with nodal metastasis. Lymphovascular invasion was also present in 1 cases of type 2 EC and adenexal involvement was seen in 2 cases with type 2 E.C.

Table 1: age group of patients

Age group	No. of cases	Percentage
<50 years	05	20%
>50years	20	80%

Table2: staging and histological types of endometrial tumor

Clinicopathological characteristics

Table 2a: Histological type

Endometrioid	18	72%
Serous	04	16%
Clear cell	01	4%
Carcinosarcoma	2	8%

Table 2b: Grading

Grade 1 (well diffrentiated)	12	48%
Grade 2(moderately diffrentiated)	09	36%
Grade3 (poorly diffrentiated)	04	16%

Table 2c: Figo staging

1A	10	40%
1B	07	28%
2	04	16%
3	03	12%
4	01	4%
T stage		
T1	18	72%
T2	04	16%
T3	02	8%
T4	01	4%
N stage		
N0	22	88%
N1	02	8%
N2	01	4%

Table 2d: lympho vascular invasion

Present	2
Absent	23

Table 2e: myometrial inasion

>50% invasion	10 cases	40%
<50% invasion	15 cases	60%

Table 2f: cervical invasion

Present	3 cases
Absent	22 cases

Table 2g: adenexal involvement

Present	2 cases
Absent	23 cases

Discussion

A majority (80%) of endometrial cancer cases were in women of 50 years and above with mean age of 61.9 ± 10 years which is comparable to study done by Hashmi AA et al [9] where mean age was 57.6 ± 9.3years and differs slightly from study done by Valu MV et al [10] where mean age was 50.54 ± 15.18years. Early age of endometrial cancer, especially in presence of family history or synchronous/metachronous cancers, raises concern about the microsatellite instability pathways induced endometrial cancers [11].

In our study 72% cases were type 1 E.C which is similar to the study made by Abdul EL et al [13] where type 1 E.C comprises 73.1% of cases. We found that type 1 E.C was more frequent compared to type 2 E.C. Type 2 E.C was noted to have higher association with Lympo vascular invasion, nodal metastasis and adenexal involvement. Type 2 E.C are more aggressive as compared to type 1, however these are less frequent compared to type 1 E.C.

In our study type2 E.C comprises of 28% of the cases, myometrial invasion was seen in all the cases of type 2 E.C which is different from study done by Lobo FD et al [12] where type 2 E.C comprises of 11.9% of cases and in more than half cases Myometrial invasion was seen but similar observation was made Hashmi AA et al [9] where type 2 EC comprised 17.8% of cases and myometrial invasion was seen in all the cases.

In our study 68% E.C were FIGO stage 1 and 48% E.C were Grade 1 which is almost similar to study done by Hashmi AA et al. [9] where 42.6% cases were grade 1 and 72.8% were FIGOstage 1. In our study among type 2 E.C, serous was most common 57.2%, followed by carcinosarcoma 28.5% and clear cell carcinoma 14.3% similar results were reported by HasmiAA et al [9] where serous type constituted 56.5% cases followed by carcinosarcoma 39% and clear cell carcinoma 4%.

Lymphovascular invasion is one of the most important pathway of tumor spread. We found that type 2 E.C have higher rate of Lympo vascular invasion compared to type 1 E.C. Cervical invasion was present in 2 cases of type 2 E.C and 1 case of type 1 E.C. Adenexal involvement present in 28% of type 2 E.C similar results were reported by Hashmi AA et al [9] where adenexal involvement is seen in 21.7% of type 2 E.C, which is alarming.

Conclusion

Our study shows that incidence of type 2 E.C is less than type 1 E.C. Among the type 2 E.C, serous carcinomas are higher in number. We also found that type 2 E.C were associated with higher frequency of nodal metastasis, which is one of the most important prognostic parameters of E.C. Lympovascular invasion, adenexal involvement was also noted more in type 2 E.C, indicating the poor prognostic profile of type 2 E.C.

References

1. Voigt LF, Weiss NS.Epidemiology of endometrial cancer. Cancer Treat Res 1989,49:1-21

2. Devi K. Current status of gynecological cancer care in India. J Gynecol Oncol 2009; 20:77-80.

3. Laryea H, Odukogbe AA, Audu B, KwawukumeEY. Endometrial cancer. In: Kwawukume EY, Ekele BA, Danso KA, Emuveyan EE,editors. Comprehensie Gynaecology in the tropics. 2nd ed. Accra, Ghana: G-Pak limited. 2017; 589-604.

4. Platz CE, Benda JA. Female genital tract cancer. Cancer. 1995;75(1):270-94.

5. Schammel DP, MittalnKR, Kaplan K,Deligdisch L, Tavassoli F A. Endometrial adenocarcinoma associated with intrauterine pregnancy: a report of 5 cases and a review of the literature. Int J Gynecol Pathol 1998, 17: 327-335.

6. Creasman WT. Disorders of the uterine corpus. In: Scott JR, Di Saia PJ,Hammond CB, Spellacy WN, editors. Danforth's Obstetrics and Gynaecology. 9th ed. Philadelphia, USA: JB Lippincott Company. 2010;723-51.

7. S. G. Silverberg, "Problems in the differential diagnosis of endometrial hyperplasia and carcinoma" Modern Pathology, vol.13, no. 3, pp. 309-327,2000.

8. M.Arafa, J. Somja, P. Dehan et al. "current concepts in the pathology and epigenetics of endometrial carcinoma," Pathology, vol. 42, no.7, pp.613-617,2010.

9. Hashmi A, Iftikhar S N, Ali J,et al.(October 18, 2020) Morphological Spectrum and Pathological parameters of Type 2 Endometrial carcinoma: A Comparison with Type 1 Endometrial Cancers. Cureus 12(10): e 11025. DOI 10.7759/cureus.11025

10. Valu MV, Toma O. A retrospective sequential study of the risk factors and the incidence of the endometrial cancers. 2017;18(3):31-6

11. Hashmi AA,Mudassir G, Hashmi RN, et al.: Microsatellite instability in endometrialcarcinoma by immunohistochemistry, association with clinical and histopathologic parameters. Asian PanJ Cancer Prev.2019,20:2601-2606.

12. Lobo FD, Thomas E: Type 2 endometrial cancers: a case series. J Midlife Health. 2016,7:69- 72.

13. Abd El- Wahed MM, Abdou AG, Al Sharaky DR, Kasem HA: Clinicopathological differences between type 1 and type 2 endometrial carcinoma. Menoufia Med J. 2017, 30:946-951.

Legend Figures

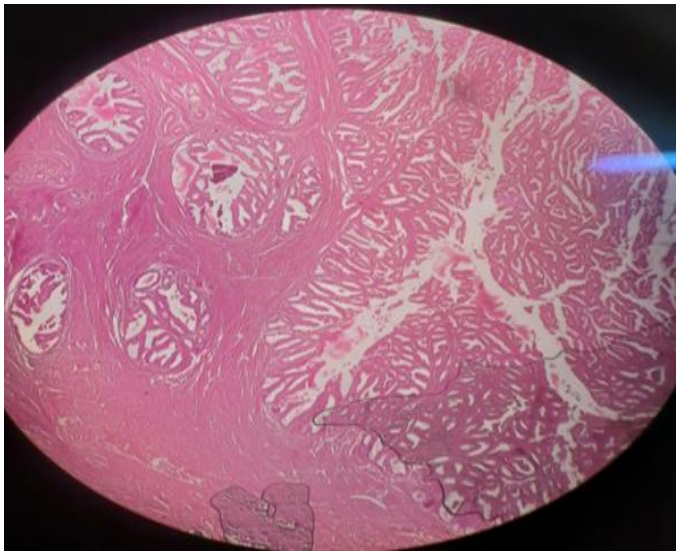

Figure 1: pic to micro graph showing well differentiated endometrial carcinoma (H&E 40X)

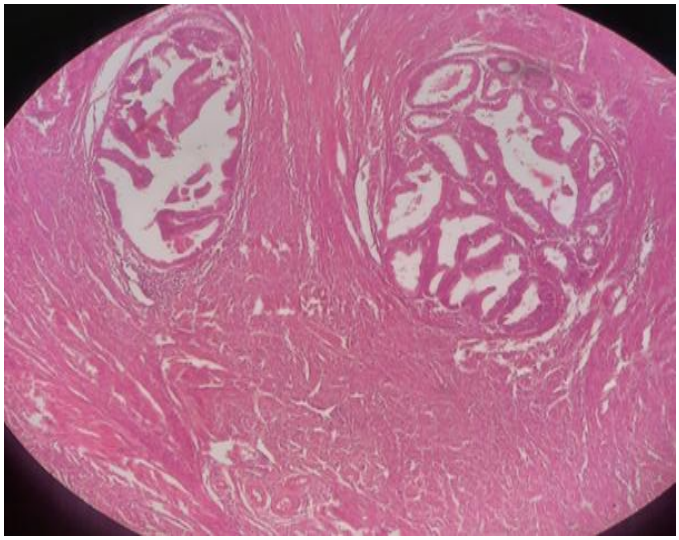

Figure 2: pic to micro graph showing moderately differentiated endometrial carcinoma H&E 40X)

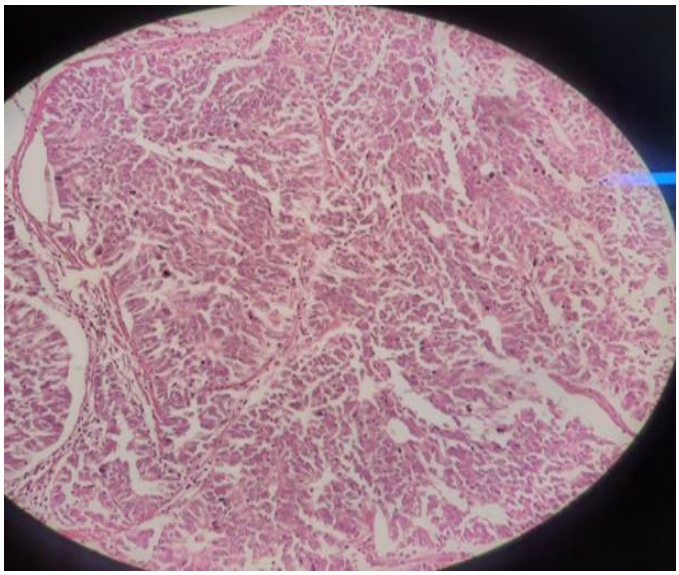

Figure 3: Pic to micro graph showing poorly differentiated endometrial carcinoma. (H&E 100X)

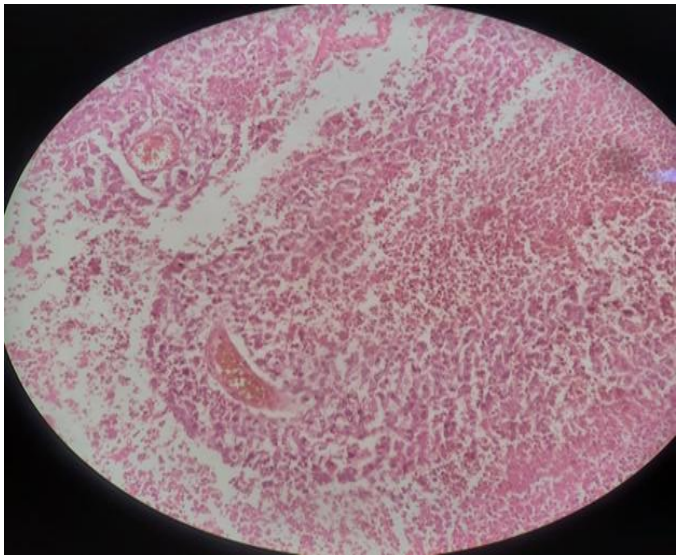

Figure 4: Pic to micro graph showing serous endometrial carcinoma H&E 100X)