

Survival Analysis Of Uterine Pappillary Serous And Clear Carcinoma Endometrium At AHPGIC , Odisha, INDIA

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ABSTRACT

OBJECTIVE –The objectives of this study was survival analysis of the clear cell and uterine pappillary serous cell carcinoma AT AHPGIC

Material methods- A cohort of 39 patients diagnosed and underwent complete surgical staging for upsc and clear cell of the endometrium from 2010- 2018were viewed ,followed by adjuvant CTRT.The Survival analysis using the Kaplan Meyers .Difference between the categorical data were calculated by chisquare.

RESULTS- We could analyse that overall 5 year survival analysis both clear cell and upsc, was 57.2%. overall survival stage III was 33.1% and that of stageIV was 30%. There were no event in stage1 and stage2.

INTRODUCTION

C lear cell carcinoma of the uterus is the rare subtype accounting for1-6% of uterine cancers, is characterised histologically by clearing of cytoplasm(1). They present in higher stage .comprehensive surgical staging is recommended in all clear cell carcinoma. Aggressive , multimodality of treatment (Including surgery, chemotherapy,and /or radiation therapy), is recommended as compared to endometrioid carcinomas. Clear cell carcinomas are genetically distinct from endometrioid cancer. Clear cell tumors show similar gene expression profiles regardless of origin.(2) • Uterine pappillary serous cancer is the most common prototype of type II endometrial cancer,which accounts for only 10% of all endometrial cancer but is responsible for 40% death in endometrial cancer(3). The most common symptom diagnosed in UPSC, as is for women with endometrial cancer , is post menopausal bleeding .This is usually mixedwith grade 3 endometrioid andclearcell .UPSC tends to occur in older women .Increase risk is seen africo american women .Upsc is highly aggressive and more likely to be presenting in advanced stage iii and iv.(4). Women , on tamoxifen for breat cancer is at a risk of upsc. Association between BRCA and upsc , is evident in the emerging data. There is a precursor lesion for, but it may present late, at advanced stage There are some similarities in serous ovarian cancer and UPSC such as tendency for peritoneal carcinomatosis, presenting with ascites, upper abdominal involvement and early lymph node involvement (5). The 5 yr survival for patients with upsc has been reported from 18% to 27%, which is probably due to extra uterine spread in 60 - 70% of the patients at diagnosis(6) . • Although clear cell serous cancer constitutes less than 10 % of the endometrial cancers, they account 50% of recurrences and disease related deaths. The most common presentation in clear cell carcinoma is post menopausal bleeding. Ther is association of BRCA , ARIDIA with clear cell cancer.There is increase frequency of clear cell , post radiation.(7) Diagnosis and work up endomerial biopsy, by pipelle has sensitivity of 99 %.Ultrasound not reliable for upsc(8) II.

MATERIAL- METHODS-

Inclusion criteria- 1. all cases of clear cell and upsc of the endometrium • Exclusion - 1.all endometrioid 2.mmm 3. sarcomas 4. cervical cancers the clinical and pathological data were reviewed at ahrcc. all the specimen were evaluated by pathologists. Thepatientsunderwent the surgical staging, histopathology was analysed. Their comorbidities, preop imaging with respect to endomerial thickness were taken into consideration.

The age , parity, menopausal staus and presenting symptoms.They were followed over period of 5yrs(60 months), post surgery post adjuvant crrt. The survival analysis by Kaplan Meyers ,the chi –square and the multivand the multivariate regression analysis done using the SPSS.

| Descriptive statistics for Clinical part | |
|---|-------------|
| Total case = 39 | |
| Overall Median (range) age in years = 61(36-88) | |
| Overall Median (range) imaging in mm = 15(3.5-34) | |
| Clinical part for clear cell | |
| Variable | n (%) |
| Age | 21 |
| median (range) in years | 60 (45-70) |
| <60 year..... | 08(38) |
| ≥60 year..... | 13(62) |
| O/H | 21 |
| Multipara..... | 17(81) |
| Nullipara..... | 04(19) |
| M/H | 21 |
| Menopause attended..... | 21(100) |
| Menopause not attended..... | 00(00) |
| Comorbidity | 21 |
| Present..... | 09(42.9) |
| 1.Hypertention..... | 05 |
| 2.Diabeties..... | 03 |
| 3.Both..... | 01 |
| Absent..... | 12(57.1) |
| Imaging | 21 |
| median (range) in mm | 15 (3.5-23) |
| <15 mm..... | 10(47.6) |
| ≥15 mm..... | 11(52.4) |
| Presently symptoms | |
| Pmb..... | 21 |
| Present..... | 20(95.2) |
| Absent..... | 01(04.8) |
| Pmwd..... | 21 |
| Present..... | 02(09.5) |
| Absent..... | 19(90.5) |
| pmod..... | 21 |
| Present..... | 00(00) |
| Absent..... | 21(100) |

FIG1

FIG-

| Clinical part for papillary serous | |
|---|---------------|
| variable | n (%) |
| Age | 17 |
| median (range) in years | 61.5 (36-88) |
| <61.5 year | 06(35.3) |
| ≥61.5 year | 11(64.7) |
| O/H | 17 |
| Multipara | 13(76.5) |
| Nullipara | 04(23.5) |
| M/H | 17 |
| Menopause attended | 16(94.1) |
| Menopause not attended | 01(5.9) |
| Comorbidity | 17 |
| Present | 08(47) |
| 1.Hypertention | 02 |
| 2.Diabeties | 04 |
| 3.Both | 02 |
| Absent | 09(53) |
| Imaging | 17 |
| median (range) in mm | 14.5 (3.5-34) |
| <14.5 mm | 09(53) |
| ≥14.5 mm | 08(47) |
| Presently symptoms | |
| Pmb | 17 |
| Present | 17(100) |

Fig-2 DESCRIPTIVE STATISTICS OF CLINICAL PART OF PAPPILARY SEROUS CANCER OF UTERUS

Pathological part for **papillary serous**

| Variable | n (%) |
|-------------------------------------|------------|
| Node | 18 |
| +ve node | 07 (38.9) |
| -ve node | 11 (61.1) |
| GRADE | 18 |
| G1 | 00 (00) |
| G2 | 06 (33.33) |
| G3 | 12 (66.67) |
| Myometrial invasion | 18 |
| <50% | 09 (50) |
| ≥50% | 09 (50) |
| Cervical Extension | 18 |
| Yes | 04 (22.2) |
| No | 14 (77.8) |
| Tumor size(in cm) | 18 |
| <3 cm | 07 (38.9) |
| ≥3 cm | 11 (61.1) |
| Lymphovascular invasion | 18 |
| Yes | 09 (50) |
| No | 09 (50) |
| Omentum | 18 |
| Yes | 05 (27.8) |
| No | 13 (72.2) |
| Other intra abdominal organs | 18 |
| Yes | 01(5.5) |
| No | 17 (94.5) |
| Peritoneal cytology | 18 |
| Yes | 05 (27.7) |
| No | 13 (72.3) |
| Adnexa | 18 |
| Yes | 06 (33.3) |
| No | 12 (66.6) |
| Endometrial Thickness | 18 |
| < 15 mm | 09 (50) |
| ≥15 mm | 09 (50) |

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Descriptive statistics for Pathological part

Total case = 39

Overall Median (range) Tumor size in cm = 03 (0.3-10)

Overall median (range) Endometrial Thickness in mm = 15 (3.5-34)

Pathological part for **clear cell**

| Variable | n (%) |
|-------------------------------------|-----------|
| Node | 21 |
| +ve node | 12 (57) |
| -ve node | 09 (43) |
| GRADE | 21 |
| G1 | 00 (00) |
| G2 | 07 (33) |
| G3 | 14 (67) |
| Myometrial invasion | 21 |
| <50% | 09(42.8) |
| ≥50% | 12 (57.2) |
| Cervical Extension | 21 |
| Yes | 02 (9.5) |
| No | 19 (90.5) |
| Tumor size(in cm) | 21 |
| <3 cm | 12 (57.2) |
| ≥3 cm | 09 (42.8) |
| Lymphovascular invasion | 21 |
| Yes | 02 (9.5) |
| No | 19 (90.5) |
| Omentum | 21 |
| Yes | 02 (9.5) |
| No | 19 (90.5) |
| Other intra abdominal organs | 21 |
| Yes | 00 (00) |
| No | 21 (100) |
| Peritoneal cytology | 21 |
| Yes | 06 (28.6) |
| No | 15 (71.4) |
| Adnexa | 21 |
| Yes | 04 (19) |
| No | 17 (81) |
| Endometrial Thickness | 21 |
| < 15 mm | 09 (42.8) |
| ≥15 mm | 12 (57.2) |

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FIG-2

Descriptive statistics for Survival part

| | |
|---------------------------------------|--------------|
| Total case = 39 | |
| Variable | n (%) |
| Grade | 39 |
| S1(1A) | 11 (28.2) |
| S1(1B) | 03 (7.7) |
| S2 | 02 (5.1) |
| S3(A) | 00 (00) |
| S3(B) | 00 (00) |
| S3(C1) | 05 (12.8) |
| S3(C2) | 13 (33.4) |
| S4(A/B) | 05 (12.8) |
| follow up | 39 |
| mean (range)in years 2.8 (1-5) | |
| < 2.8 years | 14 (35.9) |
| ≥ 2.8 years | 25 (64.1) |
| median (range)in years 3 (1-5) | |
| < 3 years | 14 (35.9) |
| ≥ 3 years | 25 (64.1) |
| survival | |
| Yes | 26 (66.7) |
| No | 12 (30.7) |
| NA..... | 01 (2.6) |
| Death | |
| Yes | 11 (28.2) |
| No | 28 (71.8) |
| Recurrence | |
| Yes | 20 (51.3) |
| No | 16 (41) |
| NA..... | 03 (7.7) |
| Loss to follow up | |
| Yes | 11 (28.2) |
| No | 28 (71.8) |

FIG-3

OVERALL SURVIVAL ANALYSIS

| Time | N risk | N event | survival | Std error | Lower 95% CI | Upper 95% CI |
|------|--------|---------|----------|-----------|--------------|--------------|
| 12 | 39 | 2 | 0.949 | 0.0353 | 0.882 | 1.000 |
| 24 | 35 | 3 | 0.867 | 0.0553 | 0.766 | 0.983 |
| 36 | 25 | 3 | 0.763 | 0.0745 | 0.630 | 0.924 |
| 48 | 8 | 2 | 0.572 | 0.1295 | 0.367 | 0.892 |

5 year overall survival is 57.2 % with 95% CI (0.367, 0.892)

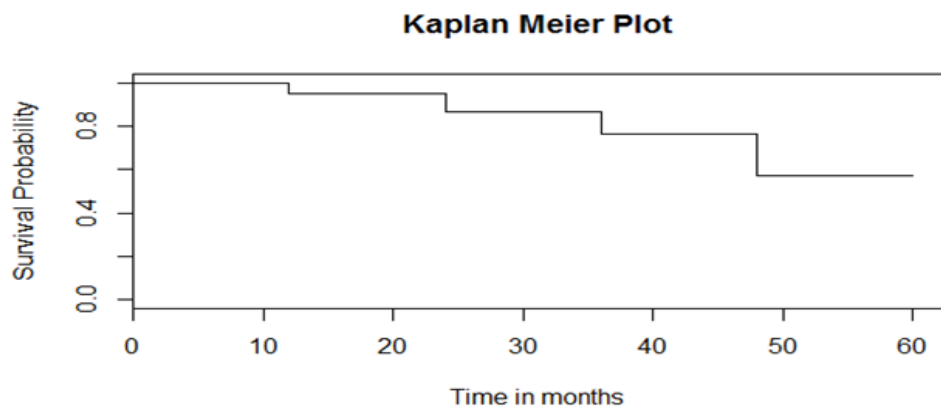


FIG-4

Survival with respect to stages

There are no event (death) occurs in state-1 and stage-2. So, survival summary for stage-3 and stage-4 are given below:

| For stage-3 | | | | | | |
|-------------|--------|---------|----------|-----------|--------------|--------------|
| Time | N risk | N event | Survival | Std error | Lower 95% CI | Upper 95% CI |
| 12 | 18 | 1 | 0.944 | 0.0540 | 0.844 | 1.000 |
| 24 | 16 | 2 | 0.826 | 0.0913 | 0.666 | 1.000 |
| 36 | 10 | 2 | 0.661 | 0.1275 | 0.453 | 0.965 |
| 48 | 4 | 2 | 0.331 | 0.1771 | 0.116 | 0.945 |

5 year overall survival for stage-3 is 33.1 % with 95% CI (0.116, 0.945)

| For stage-4 | | | | | | |
|-------------|--------|---------|----------|-----------|--------------|--------------|
| Time | N risk | N event | survival | Std error | Lower 95% CI | Upper 95% CI |
| 12 | 5 | 1 | 0.8 | 0.179 | 0.5161 | 1.000 |
| 24 | 4 | 1 | 0.6 | 0.219 | 0.2933 | 1.000 |
| 36 | 2 | 1 | 0.3 | 0.239 | 0.0631 | 1.000 |

5 year overall survival for stage-4 is 30 % with 95% CI (0.0631, 1.000)

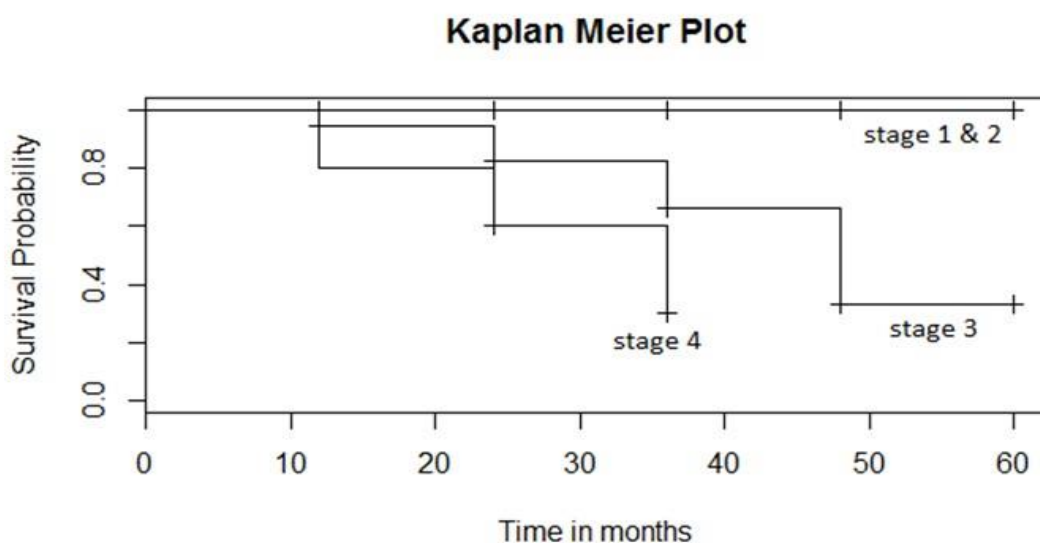


FIG-5

RESULTS :

Our study analysis revealed that maximum cases of clear cell in the median age range of 61 yrs , 13 (62%)more than 60yrs. Most of the clear cell associated with co-morbidities 21 cases(100%). 17(81%) were multiparous. They usually present with post -menopausal bleeding 20(95.2%) ,few presented with watery discharge 2(9.5%) Pre -op imaging revealed ,endometrial thickness of 15 mm was detected in 47.5% , range of minimum of 3mm to a maximum of 34 mm recorded. 14(57%) showed a grade 3. The nodal positive status 12(57%) .On multi -variate analysis , lymphovascular space invasion and myo-invasion was found to statistically significant , with a **p-value.052 and .065** respectively that affected the nodal status in clear cell carcinoma. UPSC was, more prevalent in age group of 61 yrs, multiparous 13(76%), median of 61.5 yrs. Most of them was associated with co-morbidities 8(47%), 94% attained menopause and presented with post menopausal bleeding(100%). The pre-op imaging showed a median of endometrial thickness of 14.5 mm, 9 (53%) the minimum of 3.5 mm to a maximum of 34mm were recorded. (66%)12 cases presented with grade 3 11(61.7%) were nodal status positive in UPSC. The myo-invasion >50%, LVSI+omentum+ peritoneal cytology+, adnexa+, was significantly associated with nodal positivity in UPSC in multivariate regression analysis with a p value **0f.03,03,.046,.046,.022**- We could analyse and reflect the survival using Kaplan Meyers curve i.e that overall 5 year survival analysis both clear cell and upsc, was **57.2%**. overall survival stage III was **33.1% and that of stageIV was 30%**. There were no event in stage1 and stage2.

- **ABBREVIATIONS**- UPSC - UTERINE PAPPILARY SEROUS CELL CARCINOMA ET- ENDOMETRIAL THICKNESS LVSI-LYMPHO-VASCULAR SPACE INVASION .MMMT- MALIGNANT MIXED MUELLERIAN TUMOR