ORIGINAL RESEARCH PAPER

RETROSPECTIVE EPIDEMIOLOGICAL STUDY OF CARCINOMA ENDOMETRIUM – AN INSTITUTIONAL EXPERIENCE

Oncology

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ABSTRACT

Background: Carcinoma Endometrium is one of the most common cancers of women in developed countries and third most common cancer of female genital tract cancers in developing countries following carcinoma cervix and carcinoma ovary. **Objective:** The present study was undertaken to investigate the epidemiological factors of patients with carcinoma endometrium. This study involves correlation of various factors such as age related distribution, risk factors associated, histopathological differentiation, common symptoms and the staging of the disease. **Materials and Methods:** This is a retrospective study done in Department of Radiotherapy, Stanley Medical College and Hospital, Chennai involving patients with Carcinoma Endometrium treated during 2013 to 2017. **Results:** Majority of the patients belong to 41 – 50 yrs of age group (i.e) 4th decade followed by 3rd decade. All of them were in good performance status with ECOG score 1-2. The cancer was almost equal in both premenopausal age group (44%) and postmenopausal age group (50%) respectively. The predominant histopathology noted was endometrioid carcinoma(91%.). **Conclusion:** Most of the patients were in stage III followed by stage II. Early detection of patients with carcinoma endometrium with effective screening methods play a vital role in increasing disease free survival, progression free survival and overall survival.

INTRODUCTION

Carcinoma Endometrium is one of the most common cancers of women in developed countries. [1] Most common risk factor is obesity with comorbid factors like hypertension, diabetes and this carcinoma has many hormonal and metabolic influences. In developing countries like India, carcinoma cervix is more common followed by carcinoma ovary despite many effective screening methods. Carcinoma endometrium is the third most common cancer among female genital tract cancers. This may be attributed to altered risk factors such as low socioeconomic status, multiparity, decreased obesity compared to western countries. Nowadays due to lifestyle modifications, carcinoma endometrium is slightly increasing. The commonest type of endometrial malignancy is endometrioid type (type I) which is predominantly estrogen dependent, and any condition leading to increase in estrogen whether endogenous or exogenous can lead to endometrial malignancy [2].

The present study was undertaken to study various epidemiological factors such as age related distribution, risk factors associated, histopathological differentiation, common symptoms and staging of the disease in patients with carcinoma endometrium.

MATERIALS AND METHODS

This is a retrospective study done in Department of Radiotherapy, Stanley Medical College and Hospital, Chennai involving patients with Carcinoma Endometrium treated during 2013 to 2017. 31 patients with carcinoma endometrium treated from 2013 to 2017 were enrolled in this study. The required data were collected from the records of the patients enrolled in this study. This study was conducted following the Institutional ethical guidelines.

RESULTS

A clinical sheet was designed and all data needed were entered to analyze the results. Data collected were Age of the patient, Performance status of the patient, Chief Complaints and other symptoms, Family history, Comorbid conditions, menstrual history, Obstetric history, Histopathological evidence and Stage of the disease.

Age of the patient

Majority of the patients (56%) belonged to 41 – 50 years of age group ie 4th decade followed by 3rd decade (25%)as shown in Table 1. Youngest among the study was 24 years who was a HIV positive patient.

Table 1 Age Distribution

AGE GROUP	NO. OF PATIENTS	PERCENTAGE
21-30	2	6%
31-40	8	25%
41-50	18	56%
51-60	4	13%

Performance Status

All of them were in good performance status with ECOG score 1-2

Menstrual History

With the menstrual history, the cancer is almost equal in both premenopausal age group and postmenopausal age group 44% and 50% respectively as tabulated in Table 2. 94% of patients were multiparous with 2 or more children. Only 6% were found to be nulliparous. Only one patient had positive family history, wherein her sister had carcinoma breast.

Table 2 Menstrual Status

MENOPAUSAL STATUS	NO. OF PATIENTS	PERCENTAGE
PRE MENOPAUSAL	14	44%
POST MENOPAUSAL	18	56%

Chief Complaints

Regarding chief complaints and other symptoms, leucorrhoea was found in 47% of patients and bleeding per vaginum was found in 44%of patients. Only two patients had lower abdominal pain as chief complaint and one patient presented with urinary retention since she had hydroureteronephrosis on imaging as tabulated in **Table 3**.

Table 3 Symptoms

CHIEF COMPLAINTS	NO. OF PATIENTS	PERCENTAGE
LEUCORRHOEA	15	47%
BLEEDING PV	14	44%

LOWER ABDOMINAL PAIN	2	6%
DECREASED URINARY OUTPUT	1	3%

Analysis of Comorbid Conditions

Analyzing the comorbid conditions, 15.6% of patients presented with Diabetes, 12.5% patients   with Hypertension and 6% of patients had both Diabetes and Hypertension as shown in Table 4. Similarly Obesity was found to be associated with most of the patients with comorbid conditions.

Table 4 Comorbid Conditions

| COMORBID CONDITIONS	NO. OF PATIENTS	PERCENTAGE
DIABETES	6	18%
HYPER TENSION	5	15.6%
BOTH	4	12.5%

Histopathological Studies

Histopathogical analysis after surgical staging confirmed endometrioid carcinoma as the predominant histopathology in 91% of patients followed by clear cell carcinoma in 6% and undifferentiated carcinoma in one HIV positive patient as shown in Table 5. On analyzing the variant of endometrioid carcinoma, endometrial adenocarcinoma is most common in 17 patients followed by adenosquamous in 12 patients and villoglandular variant in 2 patients. Grade II is common among all patients.

Table 5 Histopathological differentiation

HISTO PATHOLOGY	NO.OF PATIENTS	PERCENTAGE
ENDOMETRIOID CA	29	91%
ADENO CA	15	47%
ADENO SQUAMOUS CA	12	38%
VILLO GLANDULAR	2	6%
CLEAR CELL	2	6%
UNDIFFERENTIATED	1	3%

Staging of patients

Considering the stage of patients at presentation, 47% were in stage III and 31% were in Stage II. Stage I was present in 13% of patients and only 9% had stage IV disease as shown in **Figure 1**.

Fig 1. Staging of Patients
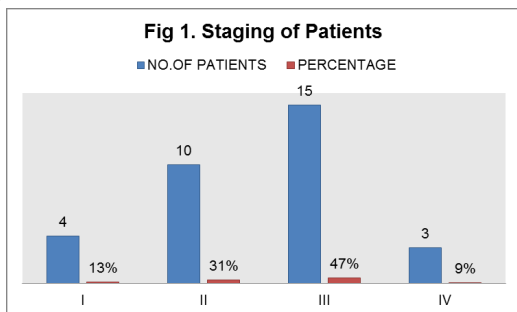
DISCUSSION

According to data published in Tamil Nadu cancer registry project published in 2020, Carcinoma endometrium was ranked seventh among women with crude incidence rate of 3.2 per 100000 population in Tamil Nadu [3]. Majority of cases were in the age group of 35 -64 years which goes very similar with this study. But in western countries, it is common in sixth decade [4]. Nowadays there is slight increase in the trend of this cancer because of lifestyle modifications, altered diet, reduced physical exercise, increasing obesity, raising comorbidities at earlier decades that too more in urban areas compared to rural areas. In Tamil Nadu Chennai city is having the highest incidence rate unlike carcinoma cervix. Good performance status is an ideal factor in most of the patients which helps in completion of the treatment in an effective manner.

In western countries this carcinoma is most common among post-menopausal women. In our study there is no significant difference between pre-menopausal and post-menopausal women [5]. Though nulliparous women have high propensity to develop this cancer, incidence of nulliparous women is low compared to western countries. Similarly only 50% of our study populations were found to have comorbid conditions and most of them with comorbid condition were obese [6, 7, 8]. Family history had no significance like western studies [9].

Regarding chief complaints and other symptoms, Leucorrhoea or white discharge per vaginum was common among premenopausal women and Bleeding per vaginum was common among postmenopausal women. Some of them had both the symptoms overlapping with each other and also with other symptoms.

Most common histopathology found was endometrioid carcinoma similar to western and other Indian studies. Among them endometrial adenocaricoma is predominant followed by adenosquamous carcinoma. Grade II was the commonest of all grades [10, 11].

Stage III followed by stage II was found in many patients which is similar to Indian data but in contrast to western countries where stage I and II are predominant. This is attributed to late detection in our patients because of unwanted hesitation and fear in urban areas and poor literacy due to low socioeconomic status in rural areas [12].

CONCLUSION

Good performance status in most of the patients with carcinoma endometrium leads to complete the treatment effectively in its stipulated time. Thus early detection of patients with carcinoma endometrium with effective screening methods play a vital role in increasing disease free survival, progression free survival and overall survival. Awareness regarding lifestyle modifications and impact of obesity has to be created among middle aged women.

Conflict of interest: The authors declare no conflict of interest.

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