Research Article

Epidemiology of Endometrial Cancer at a Tertiary Cancer Hospital, Hyderabad

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Abstract: In developed nations, endometrial cancer is the most prevalent cancer that affects women. Endometrial cancer was the third most frequent gynaecological malignancy at BIACH & RI, with 636 cases (11.5%) overall throughout the study period. The Middle and high-income groups had the highest incidence i.e. 70.28%. The majority of cases, 233 (36.63%), occurred in the age group 51–60 years, followed by 204 (32.07%) in the 61–70 age group. The mean age at endometrial malignancy diagnosis was 58.19±10.86. A stage I diagnosis was made in 35.4% of endometrial cancer cases, a stage IV diagnosis in 35.1%, a stage III diagnosis in 17.7%, and a stage II diagnosis in 11.84%. The prevalence of diabetes, hypertension, and hypothyroidism was around 23%, 39%, and 11%, respectively, in patients with endometrial cancer. Menopause was experienced by 56.4% of women between the ages of 41 and 50 and 30.33% of women between the ages of 51 and 60. Postmenopausal bleeding was found to be the main symptom in 346 instances. The illness has spread to various body parts in 136 patients. In total, nine hospital deaths have been reported.
Keywords: Endometrial cancer, epidemiology, menopausal age, stage of diagnosis, postmenopausal bleeding.

Introduction

Endometrial carcinoma, with an age-standardized incidence rate (global) of 8.4 per 100,000 women, most common gynaecological cancer in developed countries [1]. In the US, the annual incidence of endometrial cancer is 25.7/100,000 women. American women have a roughly 2.8% lifetime risk of contracting this illness [2]. Endometrial cancer incidence rates have increased over time and over consecutive generations in many countries, particularly those going through rapid socioeconomic development. Rates vary ten-fold amongst nations from 2006 to 2007. North America, Eastern Europe, and Northern Europe had the highest rates (19/100 000), whereas middle-income countries had the lowest rates (South Africa 1, and India 3) [3]. Although endometrial cancer has recently increased in frequency, cervical cancer is still the most frequent gynaecological cancer in developing countries. In India, the age-standardized incidence rate (ASIR) of endometrial cancer is 2.3/100,000 women [1]. The changing trends in women's lifestyles and reproductive patterns, particularly in urban areas, are mostly to blame for the increase in endometrial cancer in India [4]. Endometrial cancer prevalence is rising worldwide. Although an ageing population and a decline in benign hysterectomies have contributed to this trend, the main underlying cause is the rising prevalence of obesity. Obesity presents difficulties for diagnosis and treatment. In order to provide primary

prevention to high-risk women and to maximize endometrial cancer survivorship, more research is required [5]. More than one-third (34%) of endometrial cancer cases worldwide and almost half (48%) of cases in North America are thought to be directly related to having a high body mass index (BMI) [6].

The risk of endometrial cancer has been found to be correlated with parity and the time since the last birth, but there have been few studies that have looked at the prognostic implications of these reproductive characteristics. Compared to nulliparous women, parous women had a significantly (P < 0.001) better prognosis [7]. Hospital-based research on endometrial cancer survival in Mumbai reveals that Indian endometrial cancer patients with localized disease upon diagnosis have a very good prognosis [8]. The majority of endometrial cancers are detected in post-menopausal women, while 20–25 per cent of these cases are discovered before menopause [9]. Endometrial cancer cannot be screened; therefore, it needs to be actively treated as soon as it is identified [10]. Early presentation with postmenopausal bleeding assures that the majority of endometrial malignancies are curable by hysterectomy, but those with advanced disease have a poor prognosis [5].

Materials and Methods
From January 1, 2017, to December 31, 2021, this retrospective study was conducted at Basavatarakam Indo-American Cancer Hospital & Research Institute (BIACH & RI) in Hyderabad, Telangana, India. This study received permission from the BIACH & RI's ethical review committee (ECR/7/Inst/AP/2013/RR-20). Out of the 94133 total cases of cancer that were registered at the centre during this time, a total of 5524 instances of gynaecological cancer were gathered. 636 endometrial cancer cases out of the 5524 gynaecological malignancy patients underwent in-depth analysis. Each patient's MR number was used to manually collect data from clinical records, which were then instantly entered into a spreadsheet. The data were examined using IBM SPSS version 26. The data were displayed using frequency, percentage, mean, standard deviation, and range (minimum and maximum values).

Results
Endometrial cancer, which is the most prevalent type of uterine cancer, was found to be the third most common malignancy among the gynaecological malignancies with 11.51% of cases in the current study (Figure 1).
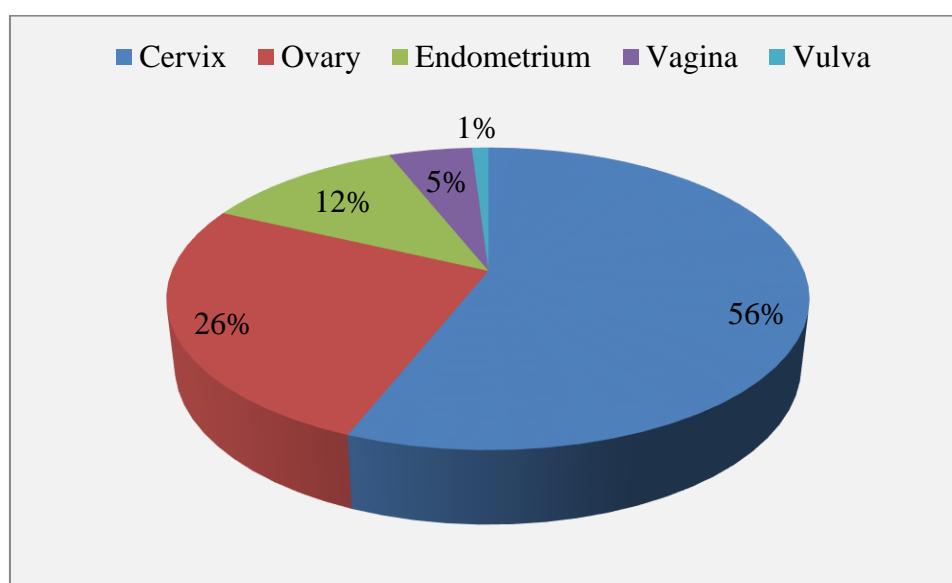

Figure 1. Represented percentage of gynaecological malignancies by site

Prevalence of endometrial cancers in different socioeconomic groups, such as low-income group labor (LIGL), low-income group non-labor (LIGNL), and middle and high-income group (MAHIG)

shown in figure 2. MAHIG had the highest incidence i.e. 70.28%, followed by LIGL with 23.27% and LIGNL with 6.45%.
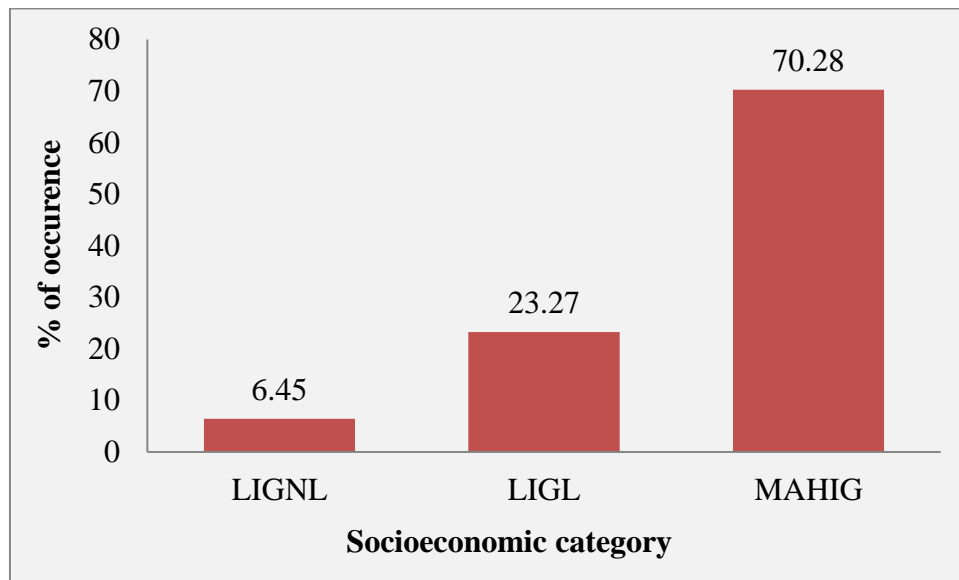

Figure 2. Represented endometrial cancer percentage in different socioeconomic groups

Table 1 displays the age-group breakdown of endometrial cancer patients. The age range 51–60 years had the highest number of cases, 233 (36.63%), followed by 61–70 years with 204 (32.07%), 41–50 years with 85 (13.36%), 71–80 years with 71 (11.17%), and with 7 (1.1%) instances each for each age range between 81-90 years and 21-30 years. The patient's mean age at diagnosis of endometrial malignancy was 58.19±10.86 years.

Table 1. Age-wise distribution of endometrial cancer in the study population

Age	Cases	%
21-30	7	1.10%
31-40	29	4.57%
41-50	85	13.36%
51-60	233	36.63%
61-70	204	32.07%
71-80	71	11.17%
81-90	7	1.10%
Total	636	100.00%
Mean age: (58.19±10.86); Min–Max: 26-86		

Stages of endometrial carcinoma presentation are shown in Figure 3. A total of 35.4% of instances of endometrial cancer were in stage I, followed by 35.1% in stage IV, 17.7% in stage III, and 11.8% in stage II.

Approximately 23% of endometrial cancer patients had diabetes, 39% had hypertension, and 11% had hypothyroidism. 56.4% of women between the ages of 41 and 50 and 30.33% of women between the ages of 51 and 60 experienced menopause. The predominant symptom in 346 cases was found to be postmenopausal bleeding, 69 cases had vaginal bleeding, and 23 cases of irregular menstrual bleeding were reported. 69 cases experienced stomach pain, distension, discomfort, or lumps. In 136 cases, the disease has spread to different regions of the genital tract, liver, bones, brain, lungs, and lymph nodes. Nine hospital deaths overall have been documented, all of which were due to the disease advancement. 36 cases (5.7%) out of 636 cases had a positive family history.
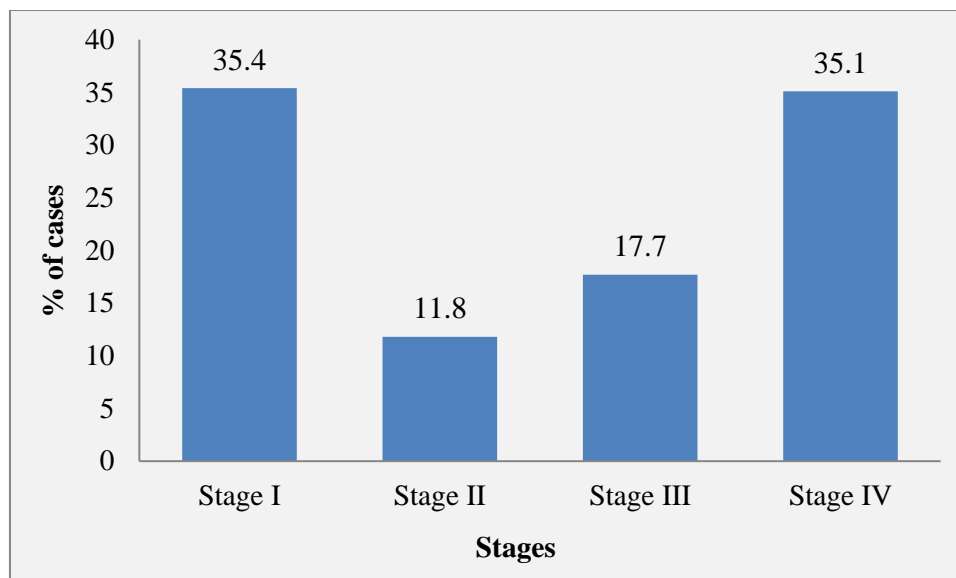
Figure 3. Represented the percentage of endometrial cancer cases presented at different stages

Discussion

Endometrial cancer, which accounts for 11.51% of cases in the current study, is the third most prevalent gynaecological malignancy. Conditions were not the same everywhere. MAHIG had the highest incidence of endometrial cancer, at 70.28%, followed by LIGL with 23.27% and LIGNL with 6.45%. The age group 51–60 years had the most instances, with 233 (36.63%), followed by 61–70 years, with 204 (32.07%), and the mean age was 58.2±10.89 in this study. Ethirajan et al. found 47.2 years as the mean age [12]. According to Mahantshetty et al. the median age was 54 years (26-72 years) [13]. Albrektsen et al. reported that the mean age at diagnosis was 55.7 years (range, 25-74 years) [7]. With a mean age of 60 at the time of diagnosis, the majority of cases manifest in the sixth and seventh decades of life according to McMeekin et al. [4]. Endometrial cancer was the most prevalent gynaecologic malignancy, with a median age of 62 at diagnosis, according to Duska et al. and Mahdy et al. [14, 2]. Adefuye et al. stated that the mean ages for endometrial cancers were (65.38 ± 7.24) [15].

In the current study, menopause was experienced by 56% of endometrial cancer patients between the ages of 41 and 50 and 30% of patients between the ages of 51 and 60. According to Amant et al. the majority of cases were discovered after menopause, with the highest prevalence occurring in the seventh decade of life [16]. Age at menopause was positively associated with endometrial cancer, according to research by Wu et al. published in 2019. Endometrial cancer risk rose with age at menopause for women whose menopausal age was > 46.5 years old [17].

Postmenopausal bleeding was found to be the main symptom in 346 patients in the current investigation. The most common presentation of endometrial cancer is postmenopausal bleeding according to Braun et al. [11] Verified by Ethirajan et al. infrequent bleeding, post-menopausal bleeding, and white vaginal discharge were prevalent symptoms in women with cancer of the uterus [12]. Wasim et al. heavy menstrual bleeding and postmenopausal bleeding were significantly seen in patients with endometrial cancer [18] about 23% of endometrial cancer patients also had diabetes. According to Saed et al. diabetes was linked to an increased risk of endometrial cancer [19].

Conclusions and Recommendations

According to projections, as the world population ages and obesity rates grow, older women may develop endometrial cancer. Risk factors linked to high unopposed oestrogen exposure of the endometrium include early menarche, late menopause, tamoxifen medication, nulliparity, infertility or failure to ovulate, and polycystic ovarian syndrome. Additional risk factors include age, obesity,

diabetes, hypertension, and hereditary nonpolyposis colorectal cancer. The American Cancer Society suggests educating all women over 65 about the risks and symptoms of endometrial cancer and encouraging them to get checked out if any symptoms arise. As the incidence of endometrial cancer rises globally, research into early detection and preventive strategies among women at higher risk is becoming more and more popular. Concentrating attention on women who experience PMB, a common indicator of endometrial cancer, may be advantageous. There is no typical endometrial cancer screening procedure. Numerous methods are being investigated by researchers to find endometrial cancer before symptoms appear. Most postmenopausal women with endometrial cancer, according to research, experienced irregular vaginal bleeding before being diagnosed. This supports the need for follow-up testing in female patients with this symptom.

Conflicts of interest: The authors declare no conflicts of interest.

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