Clinical and demographic characteristics of women ≤45 years old diagnosed with endometrial cancer 2013-2017 at Mater Health: a retrospective cohort study

Jennings-Fleischfresser, A, Cabraal, N
Department of Gynaecological Oncology, Mater Hospital, Brisbane

Introduction

Endometrial cancer is the most common gynaecological cancer in the world, and fourteenth leading cause of cancer deaths in women worldwide[1]. It predominantly occurs in postmenopausal women, and the incidence varies from one to 30 per 100000 women globally, with the highest rate occurring in developed countries[1]. The biggest risk factor for endometrial cancer is unopposed oestrogen exposure, with obesity being the most common[1]. There has been an increasing incidence of endometrial cancer in younger women[1]. As the mainstay of treatment for endometrial cancer is a hysterectomy and bilateral salpingo-oophorectomy, there are significant implications for fertility in this population, as well as the effects of premature menopause on cardiovascular and bone health[2,3].

Methods

Patients treated for endometrial cancer at the Mater Hospital were identified using the Queensland Centre for Gynaecological Cancer database. Inclusion criteria were women 45 years or younger who had been diagnosed with endometrial cancer between January 1st 2013 and December 31st 2017. A retrospective chart review was undertaken for the 45 patients who met criteria. Data collected included age, BMI, stage at diagnosis, histological subtype, treatment, survival and recurrence, with descriptive statistics used to analyse the data.

Demographics	Frequency (%)
Age at Diagnosis	
25-29	11.1%
30-34	13.3%
35-39	31.1%
40-45	44.4%
BMI	
20-29	8.9%
30-39	22.2%
40-49	22.2%
50-59	17.8%
60-69	4.4%
70-79	2.2%
Data not available	22.2%
Parity	
0	66.7%
1	13.3%
2	11.1%
3	4.4%
>3	4.4%

Results

Most women were over the age of 34 (75.5%), and 68.9% were obese. The majority of patients were also nulliparous (66.7%), and had their cancer diagnosed at Stage 1A (66.7%). Endometrial adenocarcinoma was the most common subtype on histology (95.6%). Of the 22.2% of patients who have continued with the Mirena, 40% had persisting disease at their most recent follow up sampling. Of those who had surgery, 17.1% required adjuvant therapy. Only one patient had recurrence of their disease following definitive management. One patient was not alive at two years, following surgical management of a uterine sarcoma. All other patients were alive at two years post diagnosis, with two patients lost to follow up.

Treatment	Frequency (%)
Initial Treatment	
Mirena	37.8%
Surgical	62.2%
Adjuvant Treatment	
Nil	86.7%
Radiation	2.2%
Chemotherapy + radiation	11.1%
Recurrence (Surgical Management)	
Yes	2.9%
No	88.6%
Data not Available	8.6%

Discussion

The demographic data demonstrates that oestrogen exposure is still the main risk factor for developing endometrial cancer, with over two thirds of patients being obese, and two thirds being nulliparous, similar to postmenopausal women.

Of the 37.8% of patients who were initially treated with the Mirena, 41.2% proceeded to surgery, with over 75% of patients having definitive surgical management of their endometrial cancer. Of these, only 8.6% had fertility sparing surgery, and the rest went into premature menopause. Early menopause due to surgery has an abrupt onset of symptoms, which are often more severe[3]. There is an increased risk of developing osteopenia, osteoporosis and osteoporotic fractures[3]. Early menopause has also been shown to increase the risk of coronary artery disease, stroke and heart failure[2]. These risks increase the younger that menopause occurs[2,3]. The risks and benefits of definitive surgical management compared to hormonal treatment represent some of the many challenges when counselling and managing young women with endometrial cancer.

References
1. Lortet-Tieulent J, Ferlay J, Bray F, Jemal A. International patterns and trends in endometrial cancer incidence, 1978-2013. JNCI Natl Cancer Inst. 2018;110(4):354-361
2. Honigberg MC, Zekavat SM, Aragam K, Finneran P, Klarin D, Bhatt DL, Januzzi JL, Scott NS, Natarajan P. Association of premature natural and surgical menopause with incident cardiovascular disease. JAMA. 2019;322(24):2411-2421.
3. King J, Wynne CH, Assersohn L, Jones A. Hormone replacement therapy and women with premature menopause – a cancer survivorship issue. Eur J Cancer. 2011;47:1623-1632