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Endometrial Cancer in a Young Virgin Patient with PCOS: Case Report

***Solwayo Ngwenya, MBChB, DFSRH, MRCOG**
Consultant Obstetrician & Gynaecologist, Head of Department of Obstetrics & Gynaecology, Mpilo Central Hospital, Vera Road, Mzilikazi
Founder & Chief Executive Officer, Royal Women's Clinic, 52A Cecil Avenue, Hillside, Bulawayo, Matebeleland, Zimbabwe. Email: drsolngwe@yahoo.co.uk

Abstract

A 22 year-old patient presented to me complaining of heavy periods for years. She was a virgin. Her symptomatology was worsening. She had had several prior treatment courses of progestogens. On further clinical examination and investigation she was found to have clinical features of polycystic ovary syndrome (PCOS) and endometrial cancer. She underwent surgery with loss of her fertility. This involved doing a total abdominal hysterectomy with ovarian conservation. She has been followed up and has been very well without further management.

Keywords

endometrial cancer; polycystic ovary syndrome; life-saving staging laparotomy; loss of fertility

Introduction

Endometrial cancer is the most common life-threatening gynaecological malignancy in developed countries [1]. Approximately 3-14% of endometrial cancers are diagnosed in young women under the age of 40 [2]. The occurrence of endometrial cancer in a young patient of child-bearing age poses clinical, ethical and fertility dilemmas. The majority of cancers are endometriod adenocarcinomas [3]. There is an association with Stein-Leventhal syndrome or polycystic ovary syndrome and the development of endometrial cancer [3, 4]. Treatments include conservative management to preserve fertility with progestogens or surgery which results in the loss of fertility.

Case Presentation

A 22 year-old virgin was referred to me with heavy menstrual bleeding for 1 month. She was accompanied by her mother. Her menarche was at the age of 12. The menses were regular for the first few years but then became irregular for the past 6 years. At presentation she was now bleeding with clots. She had received several courses of progestogen therapy from her family practitioner for the past year but without success.

She worked as a chef and her work plans were being disrupted. She had no significant medical or surgical history. She was a black African woman and did not drink alcohol or smoke cigarettes. She had been to many countries working as a chef in restaurants.

On examination she had hirsuitism and a body mass index of 38kg/m2. Investigations included an ultrasound scan which showed a bulky uterus of 50mmx100mm, an endometrial thickness of 28mm and

polycystic ovaries. A full blood count showed a haemoglobin of 11.6g/dl, MCV of 83.6fl and MCH of 25pg. The white cell count was 12.4, platelet count of 564 and random blood sugar of 5.8mmol/l. These were all within normal ranges. A chest X-ray was normal. A dilatation and curettage was done. The hymen was present and a small Sims speculum was used to try and limit the damage to it. The cervix appeared normal. Suspicious uterine curettings were sent for an urgent histopathological examination. A histopathological report confirmed an invasive endometriod adenocarcinoma.

This devastating news was broken to her in the presence of her mother. The options discussed were conservative treatments with progestogens to preserve fertility or surgery which would lead to loss of fertility. Because of the long periods of the symptoms and the fear of cancer spread, surgery was opted for instead of progestogens that had already failed.

A staging laparotomy was carried out. There were no cancer deposits on the peritoneum. An unusually hard and bulky uterus and normal ovaries were seen. A total abdominal hysterectomy with ovarian conversation was done. A partial omentectomy and lymph node sampling were also carried out. Post-operatively she recovered very well.

Histology results confirmed an invasive endometriod adenocarcinoma Grade 1 Stage 1B (FIGO). The omental and lymph node samples were clear of cancer cells.

Discussion

The development of malignancy is a devastating and frightening diagnosis. In the nulliparous patient it is immensely distressing. In the case that I have presented a young virgin woman had to undergo major surgery with loss of her fertility. Progestogen therapy had been tried without success over a year by the family practitioner. By the time she presented to me, she had endured a lot of anxiety. The association of obesity, PCOS and endometriod adenocarcinoma has been reported for many years [5, 6]. The patient was obese and had clinical and ultrasonographic evidence of PCOS. PCOS is the most frequent endocrinopathy in women affecting 10% of the reproductive age group [7]. Young women with PCOS are at an increased risk of endometrial cancer [6, 8]. Excess or unopposed oestrogens cause proliferation of the endometrium. Progestogens act as a protective factor against oestrogen-driven uterine cell growth proliferation [9].

Hence clinicians must maintain clinical vigilance in patients with PCOS to prevent the development of endometrial cancer even in younger patients. Obese patients especially those with PCOS must undergo regular check-ups including ultrasound scans, hysteroscopy, dilatation and curettage. Patients with PCOS should be educated about the risk of endometrial hyperplasia and cancer. They should be informed of the risks of cardiovascular disease and diabetes mellitus associated with PCOS [7].

Conservative treatment with progestogens preserves fertility but recurrence rates are high [2]. Some of the cases may fail and lead to cancer stage progression ending up with surgery and radiotherapy [10]. Hysteroscopic resection combined with progestogens can be used too [11]. Surgery is definitive and curative. It preserves life but leads to loss of fertility. Surgery is truly effective in treating endometrial cancer in women with PCOS who have progesterone resistance [12]. The 5 year survival rate for endometroid cancer stage 1 is 98% [13]. Long-term follow-ups show most patients being alive and well without any evidence of disease [3]. The use of metformin in women with PCOS and early-stage

endometrial cancer is promising [14].

Conclusion

Endometrial cancer in a young patient who has not started a family presents with clinical, ethical and fertility challenges. Clinicians and their patients must agree on a management plan that bests suits the patient to preserve life as the over-riding priority. Life-saving surgery may be appropriate even in a nulliparous virgin patient.

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Authors Information: Solwayo Ngwenya, MBChB, DFSRH, MRCOG*
Consultant Obstetrician & Gynaecologist, Head of Department of Obstetrics & Gynaecology, Mpilo Central Hospital, Vera Road, Mzilikazi
Founder & Chief Executive Officer, Royal Women's Clinic, 52A Cecil Avenue, Hillside, Bulawayo, Matebeleland, Zimbabwe

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