

**CASE REPORT****Uterine Corpus Endometrial Carcinoma in Young Women**

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Abstract

Introduction : Endometrial carcinoma is a malignant epithelial tumor that forms in the uterus's inner lining, or endometrium. The average age at diagnosis is 61 years, with cases diagnosed after 50 years more than 90%. Endometrial carcinoma is rare in young women, usually defined as occurring under age 50 or menopause, with rare cases occurring under age 40.

Case Report : A 35-year-old woman nulliparous complaints of abdominal pain since 3 months ago and complained of weight loss. Based on the anamnesis, the patient is not married. On physical examination, revealed an area of firmness in the suprapubic region associated with pain on palpation. On ultrasound examination, the uterus was found to be anteflexed, with an inhomogeneous appearance, and a solid cystic mass along the uterus. Adnexa measuring 10.02 x 10.20 x 12.02 cm, vascular scale 4, not clearly defined. The patient was diagnosed with suspected uterine corpus carcinoma.

Result : In this patient, a total hysterectomy and bilateral salpingo-oophorectomy were performed because the patient did not want fertility.

Conclusion : In young women who want to preserve fertility, conservative management is often implemented. But, when fertility-sparing treatment is not considered, the rate of recurrence and progression is considerably low in this case. Ultimately, although fertility-sparing treatments are an attractive alternative to surgery resulting in permanent loss of fertility, unfortunately, they can only be applied in a subset of cases. The standard surgical procedure recommended is a total extra-fascial hysterectomy with bilateral salpingo-oophorectomy.

Keywords: Uterine Corpus Endometrial Carcinoma, Young Women

INTRODUCTION

Endometrial adenocarcinoma (also known as endometrial cancer, or more broadly uterine cancer or uterine corpus carcinoma) is the most common malignancy of the female genital tract in the United States. It is estimated that 65,950 new cases of uterine cancer will occur in 2022, with 12,550 deaths due to the disease.¹ Endometrial carcinoma is a malignant epithelial tumor that forms in the uterus's inner lining, or endometrium. Risk factors of endometrial carcinoma include increased estrogen levels (caused by obesity, diabetes, supplemental estrogen, and a high-fat diet), early age at menarche, nulliparity, late age at menopause, Lynch syndrome, age between 55-64 years, and use of tamoxifen.²⁻⁵ The average age at diagnosis is 61 years, with cases diagnosed after 50 years more than 90%. Endometrial carcinoma is rare in young women, usually defined as occurring under age 50 or menopause, with rare cases occurring under age 40.⁶ Data show that nearly 67% of patients with endometrial adenocarcinoma are diagnosed with a disease confined to the uterus at the time of diagnosis.

CASE REPORT

A 35-year-old woman nulliparous was referred from Dr. Reksodiwiryo Army Hospital in Padang with complaints of abdominal pain since 3 months ago and complained of weight loss. Based on the anamnesis, the patient is not married. On physical examination, revealed an area of firmness in the suprapubic region associated with pain on palpation. During a laboratory examination (8th August 2023, at 12.27 p.m.), Hemoglobin levels were found to be 11.6 g/dL, Leukocytes 4,330/mm³, and Platelets 211,000/mm³. On ultrasound examination, the uterus was found to be anteflexed, with an inhomogeneous appearance, and a solid cystic mass along the uterus. Adnexa measuring 10.02 x 10.20 x 12.02 cm, vascular scale 4, not clearly defined. The patient was diagnosed with suspected uterine corpus carcinoma. The patient was planned for surgical staging. On histopathological examination (11th September 2023), several diagnoses were found of several tissues that had been taken, namely smooth muscle tumor of uncertain malignant potential of the uterine corpus, atypical hyperplasia of the endometrium, and nabothian cyst in endocervical polyps. In this patient, a total hysterectomy and bilateral salpingo-oophorectomy were performed because the patient did not want fertility even though she was not married.^{1,2}

Uterine corpus cancer is usually referred to as endometrial cancer, which arises from the epithelial lining of the uterine cavity. Its first local expansion concerns the myometrium. Endometrial adenocarcinoma (also known as endometrial cancer, or more broadly uterine cancer or uterine corpus carcinoma). The standard surgical procedure recommended is a total extra-fascial hysterectomy with bilateral salpingo-oophorectomy. Removal of the adnexa is recommended even if the fallopian tubes and ovaries appear normal, as they may contain micrometastases. Endometrial hyperplasia, in its atypical form, is a precursor lesion to endometrioid adenocarcinoma of the endometrium, which is the most common gynecologic malignancy in industrialized countries. Total hysterectomy and bilateral adnexectomy are the standard treatment for atypical endometrial hyperplasia.

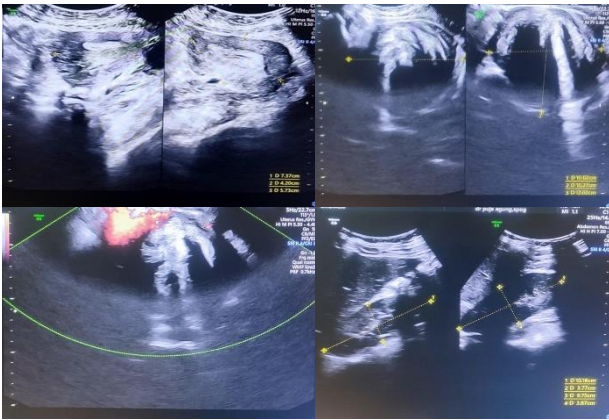


Figure 1. The results of the ultrasound examination



Figure 2. Documentation of post-operation

DISCUSSION

Uterine corpus cancer is usually referred to as endometrial cancer, which arises from the epithelial lining of the uterine cavity. Its first local expansion concerns the myometrium. Cancer that arises in the stroma and muscle tissue of the myometrium is called uterine sarcoma.^{7,8} Endometrial cancer is the sixth most common malignant disorder throughout the world. High-income countries have a greater incidence of endometrial cancer (11.1 per 100,000 women) compared with low-resource countries (3.3 per 100,000 women). This may be due to high rates of obesity and lack of physical activity—which are two major risk factors in high-income countries. In particular, increased estrogen levels are known to be the most likely cause of increased risk of endometrial cancer in postmenopausal obese women. In contrast, physical activity and long-term continuous use of estrogen-progestin combination therapy are associated with a reduced risk of endometrial cancer.^{7,9} According to the International Agency for Research on Cancer, the incidence of endometrial cancer is increasing rapidly and is estimated to increase by more than 50% worldwide in 2040.¹⁰

Endometrial carcinoma in young women develops very rarely.⁷ A limited number of studies have reported endometrial carcinoma in young pre-menopausal women. Young women with endometrial carcinoma have risk factors such as obesity (BMI >30), nulliparity, irregular menses, diabetes, smoking, PCOS, and Lynch Syndrome.^{11,12} The most frequent symptom is abnormal vaginal bleeding. Additionally, vaginal discharge, lower abdominal pain, dyspareunia, or dysuria may be present.² Endometrioid adenocarcinoma develops through the premalignant phase of intraepithelial endometrial neoplasia in the majority of cases, as does hyperplasia with atypia. Most endometrial carcinomas arise as a result of a series of somatic DNA mutations, such as PTEN, mismatch repair genes, and TP53 mutations. Mutations in the tumor suppressor TP53 have been shown to play an important role in serous endometrial cancer.¹³

Diagnosis can usually be made by office-based endometrial biopsy, with a false-negative rate of approximately 10%. Hysteroscopy may help evaluate the endometrium for lesions, such as polyps, if the patient has persistent or recurrent bleeding. Endometrial biopsy may not accurately

diagnose uterine wall malignancies such as mesenchymal tumors. Histological information from an endometrial biopsy (with or without endocervical curettage) is sufficient to plan definitive treatment.^{13,14} For detailed imaging recommendations based on stage and planned treatment approach, see “Imaging Principles” in the NCCN Guidelines for Uterine Neoplasms (available at NCCN.org). Consideration of preoperative chest imaging (chest x-ray) is recommended. Other imaging tests such as CT, MRI, US, and/or FDG-PET/CT may be used to assess the extent of disease and to evaluate for metastatic disease as indicated by clinical symptoms, physical findings, or abnormal laboratory findings. In patients with extrauterine disease, serum CA-125 testing may help monitor clinical response. However, serum CA-125 levels may be falsely elevated in patients with peritoneal inflammation/infection or radiation injury, may be normal in patients with isolated vaginal metastases, and may not predict recurrence in the absence of other clinical findings.¹⁵⁻¹⁸

The NCCN guidelines divide pure endometrioid cancer into 3 categories to describe treatment: (1) disease confined to the uterus; (2) suspected or gross cervical involvement; and (3) suspected extrauterine disease. Most patients with endometrial cancer have stage I disease at presentation, and surgery (with or without adjuvant therapy) is recommended for medically resectable patients. As a general principle, endometrial carcinoma should be completely removed to optimize outcomes; intraperitoneal morcellation should be avoided.^{19,20} Traditional surgical staging protocols include opening the abdomen with a vertical midline incision and washing the peritoneum followed by careful exploration of the intra-abdominal contents. However, laparoscopic procedures are increasingly being introduced as standard, especially for early-stage disease, as they are safe and reduce acute treatment-related complications. The standard surgical procedure recommended is a total extra-fascial hysterectomy with bilateral salpingo-oophorectomy. Removal of the adnexa is recommended even if the fallopian tubes and ovaries appear normal, as they may contain micrometastases. In premenopausal women with mild and early-stage disease, ovarian preservation may be considered. In premenopausal women with mild and early-stage disease, ovarian preservation may be considered.²¹

CONCLUSION

Management of endometrial cancer involves multimodality treatment consisting of surgery and/or systemic therapy and radiotherapy depending on the histopathological assessment of the tumor, and clinical features. The prognosis of the disease is mainly assessed based on histopathological characteristics including grade, type, LVSI, and myometrial invasion. Surgical staging of the disease impacts prognosis and guides additional treatment decisions, and is an integral part of disease management. Although surgery and/or radiotherapy is usually the standard procedure for treating early-stage endometrial cancer, more advanced stages or high-risk histology of endometrial cancer can be treated with a combination of radiotherapy and systemic therapy. The standard surgical procedure recommended is a total extra-fascial hysterectomy with bilateral salpingo-oophorectomy. In young women who want to preserve fertility, conservative management is often implemented. But, when fertility-sparing treatment is not considered, the rate of recurrence and progression is considerably low in this case.

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