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A Case Report on Multiple Fibroid Uterus with Endometrial Hyperplasia Turned To Be Endometrial Carcinoma

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Abstract

Endometrial carcinoma is the most common gynecologic malignancy in developed countries and ranks among the leading causes of cancer-related morbidity in women. Endometrial hyperplasia, particularly when atypical, is a recognized precursor with a malignant transformation risk as high as 45%. Uterine leiomyomas (fibroids), highly prevalent benign smooth muscle tumors, frequently present with heavy or irregular menstrual bleeding. In perimenopausal and obese women, such bleeding warrants careful endometrial assessment, as coexisting benign lesions may mask underlying malignancy.

This report describes a perimenopausal woman with obesity and abnormal uterine bleeding found to have multiple fibroids with atypical endometrial hyperplasia progressing to early-stage carcinoma. Diagnosis was established through imaging and endometrial sampling, followed by definitive surgical management. This case highlights the importance of maintaining a high index of suspicion for endometrial carcinoma in women with abnormal uterine bleeding, even in the presence of fibroids. Clinical vigilance is particularly warranted in patients with risk factors such as obesity, chronic anovulation, and prolonged unopposed estrogen exposure. Literature emphasizes that perimenopausal and postmenopausal women with endometrial thickening or unexplained bleeding should undergo prompt histopathological evaluation to ensure early detection. Early diagnosis at a stage confined to the uterus allows curative treatment and significantly improves outcomes. A structured diagnostic algorithm incorporating clinical evaluation, imaging, and mandatory endometrial sampling is essential to avoid delayed recognition and progression to advanced disease.

Keywords: Endometrial Carcinoma, Endometrial Hyperplasia, Uterine Fibroid, Heavy Menstrual Bleeding, Perimenopausal Bleeding.

Introduction

Endometrial carcinoma is the most common malignancy of the female genital tract in developed countries and ranks among the leading causes of cancer-related morbidity in women. Its incidence continues to rise due to increasing obesity, chronic anovulation, and prolonged

estrogen exposure without adequate progesterone opposition. The majority of cases are estrogen-dependent endometrioid adenocarcinomas (Type I), whereas non-endometrioid tumors (Type II) are estrogen-independent, aggressive, and carry a worse prognosis. [1]

Endometrial hyperplasia is a well-recognized precursor lesion of Type I carcinoma. It represents abnormal proliferation of endometrial glands relative to stroma and is frequently identified as endometrial thickening on ultrasonography. The risk of malignant transformation is strongly related to histologic subtype, being less than 2% in non-atypical hyperplasia but as high as 45% in atypical hyperplasia. [2]

Uterine leiomyomas (fibroids) are the most common benign tumors of the uterus, occurring in up to 70% of women over the age of 40. They frequently present with heavy or irregular menstrual bleeding and may obscure coexisting endometrial pathology. In perimenopausal women, abnormal bleeding attributed solely to fibroids can delay the diagnosis of endometrial hyperplasia or carcinoma, particularly in those with additional risk factors such as obesity, polycystic ovarian syndrome, nulliparity, or late menopause. [3]

Case Report

A 47-year-old P3L3 woman presented with a two-year history of irregular, heavy menstrual bleeding, occurring at intervals of 75–90 days and lasting 6–8 days, with passage of clots and progressive fatigue. Tubal ligation done 20 years back. General examination revealed pallor, pulse rate 84/min, blood pressure 120/80 mmHg, and body mass index 30.5 kg/m².

Per abdominal examination revealed soft non-tender. Per speculum examination showed a healthy vagina with cervical erosions. Bimanual examination revealed a retroverted uterus of approximately 16-week size with a posterior mass; fornixes were free, and rectal examination showed no nodularity.

Laboratory investigations showed hemoglobin 7 g/dL at presentation, which was corrected to 10.6 g/dL with transfusion of two units of packed red blood cells prior to endometrial biopsy. Blood grouping and typing – O positive. Thyroid-stimulating hormone was 9.8 µIU/mL and was on tablet Thyroxine 125mcg CA-125 level was 12 U/mL. Papanicolaou smear was negative for intraepithelial lesion or malignancy. LFT, RFT, ECG, Chest Xray, 2D Echo and Coagulation profile was done and was normal.

Pelvic ultrasonography demonstrated a bulky uterus with multiple intramural fibroids and an endometrial thickness of 16 mm (Figure 1).

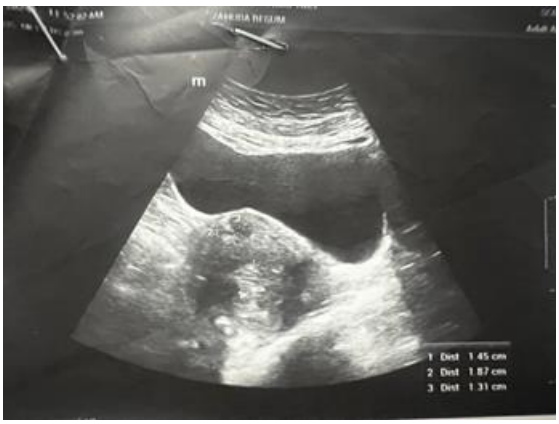

Figure 1: Bulky uterus with uterine fibroid & Endometrial hyperplasia

Management

Patient was subjected to endometrial biopsy. Endometrial biopsy showed complex hyperplasia with atypia.

After reporting of endometrial biopsy, MRI and CT was done. Magnetic resonance imaging revealed irregular endometrial thickening with less than 50 % myometrial invasion, suggestive of FIGO stage IA disease (Figure 2). Contrast-enhanced computed tomography of the abdomen and pelvis demonstrated no lymphadenopathy or distant metastasis (Figure 3).

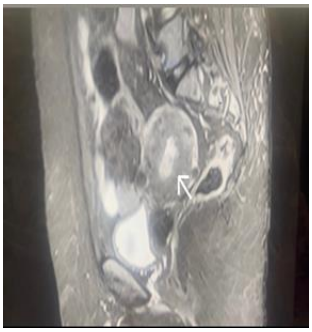

Figure 2: MRI suggested irregular and thickened endometrial lining with invasion of ~50% of the myometrium in left postero-lateral aspect. Possibility of endometrial carcinoma appears.

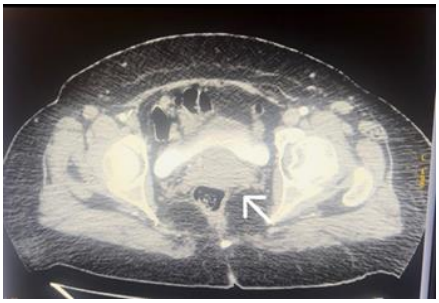

Figure 3: CT of the abdomen and pelvis with intra-venous contrast suggested endometrial carcinoma with no evidence of regional/metastasis lymphadenopathy.

Management

The patient was planned for laparotomy with "laparotomy and proceed" protocol.

Peritoneal fluid was collected intraoperatively, and cell-print cytology demonstrated clusters of atypical cells with occasional giant cells. Total abdominal hysterectomy with bilateral salpingo-oophorectomy was performed. Before closure, systematic examination was carried out in an anti-clockwise direction from the under surface of the spleen, stomach, liver and diaphragm. The surgical specimen was sent for histopathological examination. The omentum was grossly normal without thickening or hardening, and no palpable lymph nodes were identified. Peritoneal washings were negative for malignant cells. Histopathological examination of the uterus showed multiple intramural and subserosal leiomyomas (Figure 4, Figure 5) and an irregularly thickened endometrium infiltrating less than half of the myometrium.

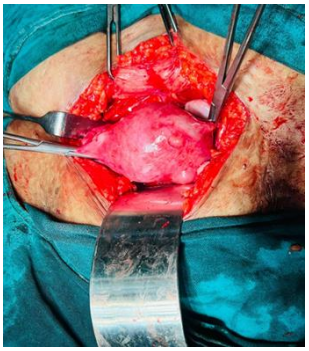

Figure 4: Bulky uterus with multiple subserosal fibroid

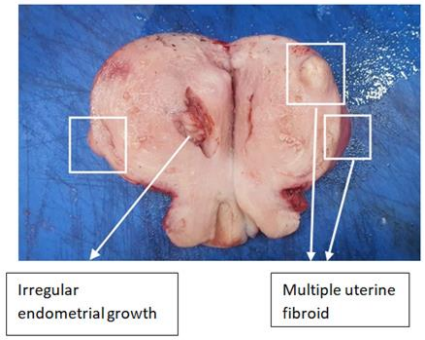

Figure 5: Cut section shows intramural anterior, posterior wall fibroid & irregular growth of endometrium in cavity

Microscopy confirmed endometrioid adenocarcinoma, FIGO stage IA, grade 2, arising in a background of atypical hyperplasia (Image 6). The postoperative period was uneventful, and the patient was discharged on the fifth postoperative day. Patient was followed up for 1 year.

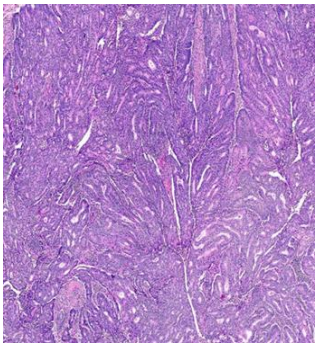

Figure 6: Microscopy showed tumour cells arranged in solid nests and sheets with loss of intervening stroma.

Discussion

Endometrial carcinoma is the most common gynaecologic malignancy in high-income countries, and its incidence continues to increase in association with obesity, hypertension, and advancing age.[6]

In perimenopausal and postmenopausal women, any form of endometrial hyperplasia should be regarded as a potential precursor to carcinoma until excluded by histopathological examination.[7]

Metabolic comorbidities contribute to chronic anovulation and unopposed oestrogen exposure, which promote endometrial proliferation and neoplastic transformation[8].

Atypical endometrial hyperplasia is the established precursor of type I endometrioid adenocarcinoma, with malignant transformation reported in up to 45 % of cases. Imaging alone is insufficient to exclude premalignant or malignant pathology, particularly when coexistent structural abnormalities such as leiomyomas provide an alternative explanation for abnormal uterine bleeding. Endometrial sampling remains the diagnostic standard for identifying disease at a potentially curable stage[9].

Histologic grading and pathologic assessment following hysterectomy are major determinants of outcome. The FIGO system stratifies tumours according to differentiation, and grade 2 carcinomas are associated with a higher risk of recurrence than grade 1 lesions even when limited to the endometrium[10].

Intraoperative evaluation that includes peritoneal cytology, systematic palpation of lymph-node basins in an anti-clockwise sequence along the upper abdominal viscera, and careful inspection of the omentum ensures that gross extrauterine spread is excluded and confirms the adequacy of the surgical procedure. In this patient, disease confined to the uterus (stage IA) was managed effectively with total abdominal hysterectomy and bilateral salpingo-oophorectomy without the need for lymphadenectomy.

Early histological diagnosis of atypical hyperplasia, appropriate operative assessment, and accurate FIGO grading allow definitive management before deep myometrial invasion or extrauterine dissemination occurs, optimizing long-term outcomes in women at increased risk because of age, obesity, or hypertension.

Conclusion

A high index of suspicion for endometrial carcinoma is warranted in perimenopausal and obese women presenting with menstrual abnormalities. Endometrial biopsy should be performed in these patients whenever hyperplasia is suspected, irrespective of coexisting benign lesions or clinical impression. Early histological diagnosis enables definitive treatment before progression to invasive disease, thereby improving prognosis. A systematic diagnostic approach prevents delayed recognition, reduces complications, and optimizes long-term survival by ensuring management at an early, curable stage and prevent progress to invasive carcinoma and avoid radio and chemotherapy.

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