CASE REPORT

Endometroid Adenocarcinoma: A Possibility after Hysterectomy

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Abstract

Malignant transformation is a rare sequelae of endometriosis. We report a case of Mrs. GR who was a 57-year-old, nulliparous woman. She presented with passing fecal matter vaginally and a left pelvic mass increasing in size and discomfort. She had a history of subtotal hysterectomy and bilateral salpingo-oophrectomy for endometriosis and was incidentally found to have a benign Sertoli-Leydig cell tumor in a single ovary. She subsequently had a CT scan confirming the presence of a mass greater than 9 cm in size. The biopsy suggested endometrioid adenocarcinoma. Our case shows possibility of malignant transformation of endometriosis after hysterectomy and bilateral salpingo-oophrectomy in a patient with a prior history of endometriosis.

Keywords: Endometrioid adenocarcinoma, Cytokeratin 7, EMA.

INTRODUCTION

Malignant transformation is a rare sequalae of endometriosis. Endometriosis is ectopic endometrial-like glandular epithelium and stroma, which may under the influence of the estrogen become hyperplastic and transform into cancer. The patient may present with a mass in the pelvis, abdominal pain, bleeding per rectum or vaginal bleeding.

In the literature, malignant transformation of endometriosis occurs in 0.7 to around 1% of patients with endometriosis with 76% of the cases occurring in the ovary.[1] Most endometrioid carcinomas of the ovary are thought to derive from the modified surface epithelium of the ovaries without interposition of pre-existing endometriosis.[2] Based on case series, 63 to 70% are ovarian endometriosis related malignancies and about 25 to 37% of all malignant transformation of endometriosis come from extraovarian endometriosis, with 80% of them being endometrioid carcinoma.[3,4] Amongst extragonadal sites, the colorectum is involved in only 5% of endometriosis-associated malignant tumors.[5]

It is important to recognize the possibility of this tumor when evaluating a pelvic mass, even in a patient who has undergone a total abdominal hysterectomy and bilateral salpingo-oophrectomy, and more so in those who have a co-existing estrogen dependent tumor, estrogen secreting tumor, and a history of use of HRT.[6]

CASE REPORT

Mrs. GR was a 57-year-old, nulliparous woman. She presented with passing fecal matter vaginally and a left pelvic mass increasing in size and discomfort. When presenting, she complained of bleeding per vaginum for 3 months varying in color from bright red to brown. She was generally unwell with alternating constipation and diarrhea. She had reduced appetite and lost weight (6 kg in 3 months) and felt 5 to 6 episodes of fecal loss vaginally.

She had a history of a subtotal hysterectomy and bilateral salpingo-oophrectomy for endometriosis and was incidentally found to have a benign Sertoli-Leydig cell tumor in a single ovary. The peritoneal washings at the surgery were negative. She underwent menarche at age 17 and had dysmenorrhea since then. She had been treated with Danazol for suspected endometriosis in the past. She had one miscarriage at the age of 30. There was nothing significant in her medical, surgical and social history.

She subsequently had a CT scan confirming the presence of a mass greater than 9 cm in size, markedly lobulated and extending to part of the rectum and inferiorly to the vagina (as depicted in Figure 1). She had left hydronephrosis superior to level of pelvic mass. There was also a 4 to 8 cm large metastatic deposit in the liver, which is seen in Figure 2.

Further to this, the patient had an examination under anesthesia and a biopsy was performed. On examination, no tumor was found to be present in the rectum with a significant extrinsic component. The pelvic mass was continuous with the cervix and the tumor was expressed through it. The tumor cells were immunopositive for cytokeratin 7 and EMA, but negative for cytokeratin 20, Inhibin, Chromogram. The histology suggested adenocarcinoma with features consistent with

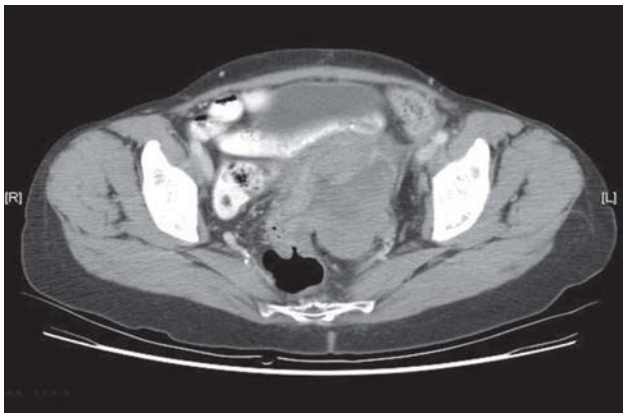

Fig. 1: CT Scan pelvis: Marked increase in size left pelvic mass (> 9 cm) extends posteriorly to rectum

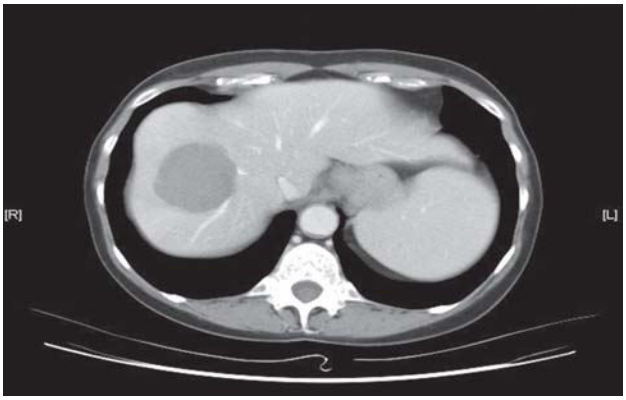

Fig. 2: CT scan: 4.8 cm diameter hypoechoic irregular mass in right lobe of liver

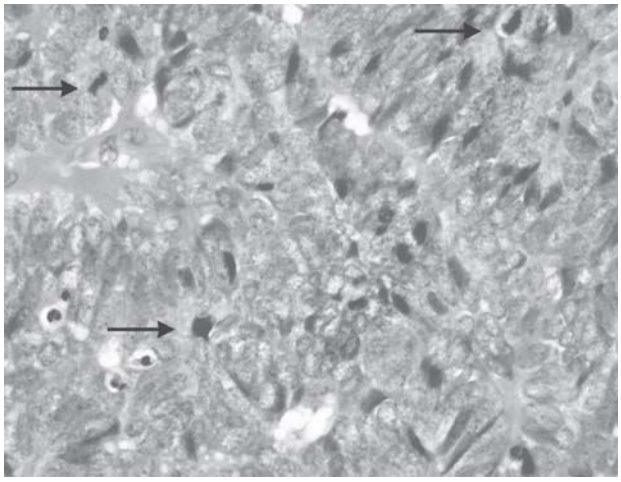

Fig. 3: Microscopy of endometroid adenocarcinoma: The carcinoma cell more rounded clumped chromatin with numerous mitotic figures (arrows). Mitotic figures stain: H&E high power (*Courtesy*: Dr Muhammed, Pathology, CUH)

endometrioid adenocarcinoma of a high-grade type as seen in Figure 3.

This patient had a defunctioning ileostomy created laparoscopically. Operative findings confirmed a large pelvic tumor with extensive invasion into the sigmoid colon, descending colon, a small bowel interloop and cecum. On 3rd day postoperative, she complained of left lower leg swelling, was commenced on therapeutic Iow molecular weight heparin (LMWH), and a subsequent left limb Doppler suggested the presence of left common femoral vein thrombosis. On day 6, the patient complained of breathlessness and has reduced air entry in the right base of lung. A sputum culture grew *Pseudomonas* and she was treated with Meropenam. A ventilation perfusion scan was performed, however the results were inconclusive and she was continued on therapeutic LMWH.

Two months later she began to have daily rectal bleeding. Her hemoglobin dropped from 9.3 to 7 gm/dL and she required multiple blood transfusions. Sigmoidoscopy showed tumor invading the midsigmoid but no active bleeding area was found. As a result of the persistent rectal bleeding, a green field filter was placed and Innohep discontinued. Postfilter placement, the plan was to commence palliative radiotherapy.

DISCUSSION

Adenocarcinoma of endometrioid histology can be found in endometrium, ovary, endocervix and all pelvic tissue including the colon. The importance of discriminating the origin of this tumor is paramount to determine the appropriate treatment. Hence, the study of the immunohistochemistry of this tumor, such as using staining for Vimentin, CEA D14 and CEA monoclonal AB, is done in an effort to distinguish if it is of endometrial, endocervical, ovarian and colonic origin.[7]

Our case shows possibility of malignant transformation of endometriosis after hysterectomy and bilateral salpingo-oophrectomy in a patient with a prior history of endometriosis. It is diffcult to predict the histological origin of the tumor as it was found at such an advanced stage with a metastatic component in the liver and invasion into intestine and colon.

We retrieved annual CT scan images after her first surgery and found no significant lesion in the pelvis until 2007, which would imply, the growth was considerably fast. Although there are case reports published regarding the growth of similar tumors, post hysterectomy and bilateral salpingo-oophrectomy, none suggest rapid progression as seen here. The cause of the rapid progression of this tumor is difficult to determine.

There is contradicting evidence regarding Danazol and the increased risk of ovarian cancer. There is a suggestion of an increased risk of ovarian cancer.[8] With regard to extra-androgenic hormone, a population-based control study had shown no correlation between Danazol and stimulation of epithelial ovarian cancer as Risch proposed in 1998 with the androgen hypothesis.[9] With reference to the histological type of tumor, it is important to know that about 69 to 80% of malignancy associated endometriosis is of endometrioid adenocarcinoma type.[10] Our case is in line with the left-sided predominance for tumor occurrence of this type.[2]

It is imperative to appreciate the possibility of tumors arising from endometriosis when evaluating pelvic masses with the possibility of rectal or intestinal involvement in women, even in the patient who has previously undergone a hysterectomy and bilateral salpingo-oophorectomy, particularly if the patient has a history of endometriosis and has concomitantly had an estrogen secreting tumor or received hormone replacement therapy.[11,12]

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