

Global Research in Gynecology and Obstetrics

Research Article

8 – Year Survival of a 23- Year-old with Endometriod Adenocarcinoma of the Uterus Stage 4B

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Received: 15 October 2020; Accepted: 09 December 2020; Published: 10 December 2020

Citation of this article: Yusof, J., Noor, RM., Aliyas, I., Mustafa, AMA., Alunad NH. (2020) 8 – Year Survival of a 23- Year-old with Endometriod Adenocarcinoma of the Uterus Stage 4B. *Global Res Gynecol Obstet*, 2(2): 16-21.

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Abstract

Endometrial carcinoma (EC) usually occurs at after their thirties. A patient with stage IV EC usually shows short life expectancy. Here, we describe a unique stage IV EC patient, unique in that 1) she was 23 years old and 2) she survived 8 years. A 23-year old woman had heavy bleeding and the condition was diagnosed as uterine myoma: myomectomy was performed; during the surgery bloody ascites was noted and histological examination of resected uterine tissue (initially considered as myoma) revealed EC. Diagnosing this condition as EC, after informed consent, total abdominal hysterectomy with bilateral salpingo-oophorectomy with omentectomy was performed. Also, intra-surgical examination revealed the presence of sub-diaphragmatic metastatic lesion, which was resected. Reduction surgery was successfully performed; however, the cancer recurred, to which chemotherapy and irradiation was performed; she died after 8 years. We did not save her life; however, she lived 8 years in self-dependent manner. We believe that adequate initial debulking surgery, favorable responses to the chemotherapy, and palliative radiotherapy may be the reason for this long survival. The present case may offer useful insight into the clinical management of stage IV EC in a young patient.

Keywords: Advance Endometriod Adenocarcinoma of the Uterus, Young female, Prolong survival

Introduction

Endometrial cancer is usually seen in post menopause women but 2-14% may occur in younger women less than 40 years old who wants to preserve their fertility [1]. We report a 23- year old single nulliparous with endometrial cancer stage 4 who had prolonged survival for 8 years.

Case Report

Patient was a 23- year - old factory worker who presented with the first episode of heavy menstrual bleeding (HMB) in May 2010 for 2 months. She attained her menarche at the age of 13 years old, her menses was regular of 7 days' duration, 28 days' interval until the age of 23 years old in 2010, she experienced HMB. She experienced heavy menstrual flow especially on day 3 menses and severe dysmenorrhea especially on day 1 menses. She had to use about 3 to 4 pads per day during heavy bleeding days especially on day1 and day 2 and also experienced flooding. She also experienced intermenstrual bleeding whereby she had 2 – 3 episodes of menses in a month. She was easily lethargic and had mild dizziness. She neither had other bleeding tendencies nor had history of loss of weight or loss of appetite. Patient later developed abdominal mass which she noticed 2 months later in July 2010 after the first episode of her HMB. However, she had no urinary problems and has not changed her bowel habits. Upon further questioning, she had no family history of breast, gynaecological or colon malignancy. She went to see the private general practitioner and was told to have uterine fibroid and was referred to gynaecology clinic.

At gynaecology clinic Sultanah Bahiyah Hospital (HSB), she was diagnosed to have uterine fibroid by a transabdominal scan of 18 weeks' size and was given tranexamic acid from day 2 to day 5 menses. Her body mass index was 21 kg/m². The fibroid was located posteriorly measuring 4 x 5 cm, with endometrial thickness of 5mm and uterine size was of 9 x 7 cm. Her ovaries were normal. Ultrasound showed no ascites. Unfortunately, patient's menses did not improve after treated with tranexamic acid for 1 year but haemoglobin monitored 3 monthly maintained 9-10 g/dL with oral haematinics. Finally, she agreed for myomectomy whereby she was given preoperatively treatment with GnRH analogue leuprorelin acetate 10 months later in May 2011 and undergone myo-

mectomy on 2nd July 2011.

Intraoperatively, there was a pelvic mass measuring 18 weeks size with blood stained peritoneal fluid of 1.2 litre. There was a posterior fundal fibroid measuring 6 x 5 cm with no obvious capsule seen, hence the enucleation was difficult. Both of her ovaries and fallopian tubes were normal. The blood loss during the operation was only 200 ml. She was fortuitous as the myomectomy was actually done by a Gynaecologist Oncologist who had suspected uterine carcinoma intraoperatively based on the blood stained ascitic fluid. True enough, the histopathological examination (HPE) of the fibroid came as endometriod endometrial adenocarcinoma FIGO grade II. Unfortunately, expression of steroid hormone receptors through immunostaining could not be performed at that time as the immunostaining facility was not available. Taking into account the findings of HPE, the patient was recalled immediately after undergoing myomectomy for 12 days. She was advised for urgent CT Thorax Abdomen and pelvis (CT TAP) succeeded by Extrafascial Hysterectomy + Bilateral Salpingoohorectomy as delaying the treatment may result in dissemination of the disease resulting in advanced stage of disease. The patient was extremely shocked, but after thorough consultation, she agreed to a major operation. She had a CT TAP examination on July 26, 2011, which revealed metastatic endometrial cancer. Her subhepatic mass was 3.0 x 6.4 cm (Figure 1). Her uterus was large, with fluid accumulation and local infiltration into the bladder and rectum. There was no clear fat plane with the urinary bladder anteriorly and upper rectum posteriorly (Figure 2). She also had moderate to gross ascites and several peritoneal seedlings (Figure 3).

The final impression of CT TAP made was correlating with HPE finding- Endometrium cancer with peritoneal metastases. Before the operation, her Ca125 was normal at 13. She underwent midline laparotomy Total Abdominal Hysterectomy Bilateral Salpingoophorectomy (TAHBSO) + Infracolic omentectomy + tumour debulking on 27th July 2011 which was 3 weeks after her myomectomy. The results of her surgery showed that she had 700cc of hemorrhagic ascites and the uterine volume was 10 weeks. The cross section showed a small growth area, and the cavity area was 2 x 2cm. The Hepatobiliary team was called in to proceed with the debulking of the peritoneal nodule over the subdiaphragmatic

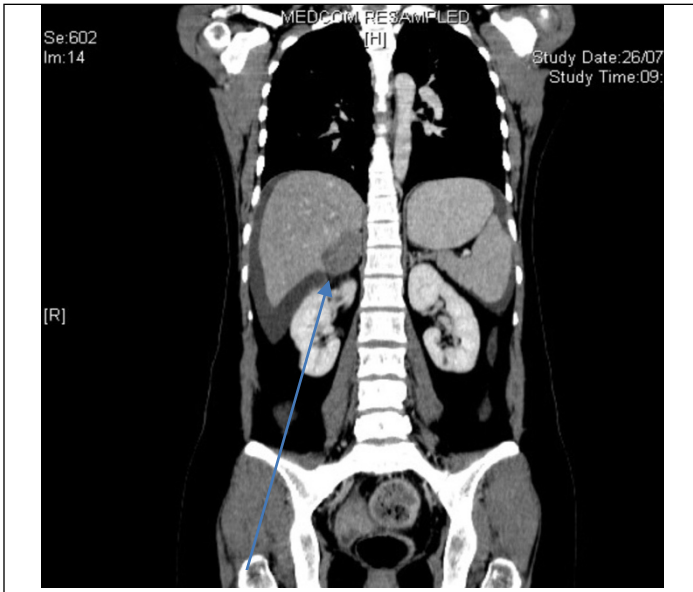


Figure 1: Subhepatic mass measuring 3.0 x 6.4 cm

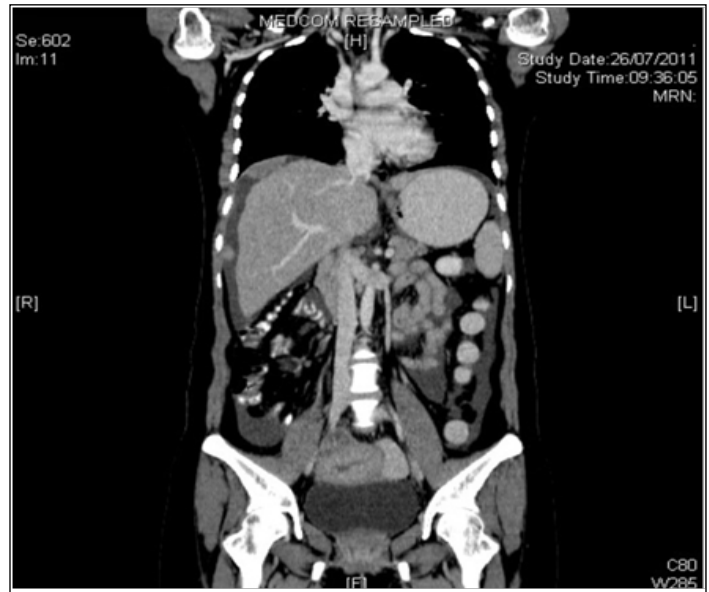


Figure 3 : Multiple peritoneal seedlings



Figure 2 : Uterine tumor with hydrometra with local infiltration to the bladder

region measuring 3.0 x 6.4 cm. The final diagnosis HPE of her TAHBSO specimen was Endometriod Adenocarcinoma of the uterus (EAC) Stage 4B with the metastasis to the right ovary and tumour deposits located at subdiaphragmatic tissue and peritoneal wall. Six weeks after the operation, she visited the gynaecological cancer clinic. She had no complaint. Her scar had healed well. She undergone her 1st cycle of chemotherapy on 1st September 2011 which was doxorubicin and cisplatin. She endured the first chemotherapy well with no serious adverse effect after her HPE report was reviewed. Prior to chemotherapy, she had a baseline echocardiogram done on 10th August 2011 as doxorubicin can cause cardiotoxicity. Her baseline echocardiogram was normal with good ejection fraction of 60%. Besides that, she also had 24 hour urine creatinine clearance done prior to chemotherapy and the value was 93.1 ml/min which was normal (normal value is > 70 ml/min). She was given 107 mg (75mg/m²) cisplatin in 500 mls over 6 hours followed by IV Doxorubicin 72 mg (50 mg/m²) slow bolus within 5 minutes. Her chemotherapy was given every 3 weeks interval and she was covered with aprepitant 80mg OD for 3 days upon discharge for antiemetics. Her tumour markers prechemotherapy were normal.

She completed her 6 cycles (#) of doxorubicin and cisplatin in January 2012 and her disease free interval (DFI) was 5 years (2011-

2016). She was regularly monitored by CT TAP 6 monthly to once a year. Unfortunately, she complained of persistent pain in her right hip in May 2016. She denied numbness or difficulty walking around. Clinically, there was an obvious lump in her right hip area with a size of 4 x 5 cm. Pelvic X - ray was done which revealed a mass measuring 4 x 4 cm at the right iliac crest. CT TAP was done in May 2016, which revealed multiple sclerotic and lytic lesion and erosion of right iliac bone with right psoas mass measuring 8x 15 cm. She also developed splenic, peritoneal and mesenteric metastases detected on CT TAP. A bone biopsy was taken by the orthopaedic team of which the HPE came back as metastatic carcinoma consistent with endometriod adenocarcinoma. Besides being treated with Pregabalin 100 mg daily, she agreed for palliative chemotherapy, which was 6 # paclitaxel/ carboplatin as well as treated with hormonal therapy, which was medroxyprogesterone acetate (MPA) 100 mg daily. After completing palliative chemotherapy-6# Paclitaxel/Carboplatin, she was monitored by CT TAP in November 2016. CT TAP showed that the lesions of the spleen had been reduced, but the size of the mass seen on the right psoas muscle was still similar to that in May 2016. Bone scan was also done in Pulau Pinang Hospital, which revealed intensive uptake at the right pelvic region corresponding to residual disease in soft tissue as well as metastases at right ala sacrum and right ilium. After consultation with Oncologist from Pulau Pinang Hospital, she later undergone 10 # of palliative radiotherapy. Succeeding palliative radiotherapy in November 2016, her pain at the right buttock had improved. She continued her regular surveillance follow up with Gynaecology Oncologist at HSB as well as Oncologist from Pulau Pinang Hospital. She succumbed death 3 years later after her bone metastases in 2019 at the age of 31 years old.

Discussion

Endometriod adenocarcinoma (EAC) of the uterus occurred in 2%–14% of cases, in patients less than 40 years of age [1]. The youngest age reported was a – 13 – year old girl from Korea who presented with heavy menstrual bleeding due to stage 1 endometriod carcinoma [2] detected on MRI pelvis and treated conservatively with levonorgestrel intrauterine system device. This 13 year-old – girl noted to have polycystic ovaries on MRI pelvis. However for this unfortunate patient, the risk factor for her to develop stage

4 endometriod adenocarcinoma of the uterus at the age of 23 years old was uncertain. She had no family history of malignancy, she was not overweight and her ovaries intraoperatively were not morphologically polycystic. With the surgical pathology diagnosis of EAC stage 4B, she tremendously survived for 8 years. According to statistics on uterine cancer in the UK, their 1-year survival rate in EAC stage 4 is 10% [3]. Therefore, some factors help prolong survival in this patient were identified and discussed as follows :

Role of cytoreduction surgery

Although the majority of patients with endometrial cancer are diagnosed at an early stage, from 10% to 15% will present with advanced-stage disease, and their prognosis is poor. When disease is primarily intraperitoneal, management is often extrapolated from that of ovarian cancer. Cytoreduction to <2 cm has also been correlated with survival, with the maximum benefit in patients who can be reduced to no visible disease remaining [4]. A recent meta-analysis of cohorts of patients undergoing cytoreductive surgery for advanced or recurrent endometrial cancer demonstrated an association between optimal tumor debulking and survival. A 10% increase in the percentage of patients undergoing complete cytoreduction was associated with a 9.3-month improvement in overall survival for the cohort [4]. This patient had 3.0 x 6.4 cm tumor deposit at the sub diaphragmatic region which was resected completely by the hepatobiliary team of HSB during extra fascial hysterectomy which explained the good survival outcome of this patient for 8 years.

Role of chemotherapy in advance stage vs abdominal irradiation

The most common chemotherapy regime used in HSB for endometrial cancer is combination of Doxorubicin and Carboplatin in about 60% of cases. Combination of paclitaxel and platinum were given to approximately 40% of patients. Sovak et al. [6] reported that carboplatin paclitaxel regimen is well tolerated, active regimen for the treatment of resected stage III or IV with 3 year survival rate of 56% and median survival of 47 months. The GOG122 trial also reported that the overall survival of patients receiving

adjuvant chemotherapy was better than that of peritoneal disease and residual nodules with stage III or IV total abdominal irradiation < 2cm [7,8]. However, Maggi et al. reported no difference between therapies in terms of overall survival in 345 high-risk patients receiving either cisplatin, doxorubicin, and cyclophosphamide or external pelvic radiation. Histopathological biomarkers (grade, depth of invasion, histology, lymphovascular space invasion) and patient's age have been evaluated to define risk strata in patients with early-stage disease, but they have not been used to predict which patients will respond to chemotherapy. As for this patient, she achieved 5 - year- disease free survival following diagnosis of endometriod adenocarcinoma Stage 4B treated with adjuvant chemotherapy of doxorubicin and cisplatin with no pelvic lymph node dissection.

Role of hormonal treatment for recurrence

Hormonal therapy had been given to patient with recurrent and metastatic endometrial carcinoma with response rate 14-53% for Medroxy progesterone acetate (MPA) 9-35%, for hydroxyl progesterone acetate and 11-56% for megestrol acetate [9,10]. Study done by Leszek Gottwald et al. [11] had reported that 8.7% of their patients with recurrent disease survived for 5years. This patient survived for 3years following bone recurrence treated with MPA 100 mg daily.

Any role of pelvilymphadenectomy and oophorectomy for prolonged survival?

As mentioned before, this patient undergone midline laparotomy extrafascial hysterectomy bilateral salpingoophorectomy in 2011 at the age of 23 years old. She did not have menopausal symptoms following the operation. Oophorectomy is usually included to identify micrometastases in the ovary and to decrease circulating estrogen production, which could theoretically promote the proliferation of metastatic cells outside of the uterus [4]. As for this patient, she developed metastases to the right ovary 3 weeks following the myomectomy. Study revealed that ovarian preservation was associated with improved survival hence decreased risk of cardiovascular death but only if Lynch syndrome was excluded⁽⁴⁾ For this patient, oophorectomy was performed as she developed metastases to the ovary. Meanwhile, National Comprehensive

Cancer Network (NCCN) and Ayhan et al. suggested performing pelvic lymphadenectomy in all patients because the most important prognostic factor in endometrial cancer is nodal involvement. The outcome of pelvic lymph node dissection best determines the exact stage of the patient and allows tailored adjuvant therapy, while pelvic lymph node dissection itself can provide survival benefits without increasing the incidence significantly [5]. However, this patient did not undergo pelvic lymphadenectomy as her pelvic lymph nodes intraoperatively were not enlarged.

Conclusion

Although endometrial cancer most commonly occurs in post menopause patients especially in obese patients, it still can occur in young patient. Appropriate surgical and choice of adjuvant therapy need to be tailored according to patient's comorbid, family history and social support. This case also revealed that regular surveillance and discussion with oncologist are essential not only it prolongs survival but also may improve this patient's quality of life.

Acknowledgement

I would like to express my gratitude to Dr Izzuan Khirman Adnan, my family and my fellow colleagues from O&G Department of Sultanah Bahiyah Hospital, Alor Star Malaysia.

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