Case Report

A HEALTHY PREGNANCY FOLLOWING CHEMOTHERAPY FOR DYSGERMINOMA

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Abstract

Dysgerminoma, a malignant germ cell tumour of the ovary develops in female girls and young women in 2nd to 3rd decade. It is usually diagnosed in early stage of its development (stage Ia). Most of the cases are unilateral. So conservative surgery followed by chemotherapy is the treatment of choice, specially in young patients who are desirous for childrens. Response to multiagent chemotherapy is excellent rescuing patients from infertility and early mortality. The 5 years survival rate is > 96% if the tumour is confined to ovary. Even it is curable when diagnosed and treated in early stage. This particular patient was a documented case of dysgerminoma who had normal pregnancy and normal delivery after treated by chemotherapy

Introduction

Ovarian cancer is the 5th leading cause of cancer related death in women. Though documented to occur in all age groups, it is usually a disease of postmenopausal and prepubertal girls. According to FIGO and WHO, germ cell tumour (GCT) of the ovary constitutes 5-10% of all ovarian cancers and dysgerminoma constitutes 50% of all germ cell tumour[1]. Dysgerminomas are important irrespective of incidence as they effect women of reproductive age. In fact, dysgerminomas make up two thirds of all malignant ovarian tumours in women younger than 20 years[2]. Mean age is 22 years of 75% of dysgerminomas[1,2]. Many of them produce biological markers like AFP, HCG, LDH, Carbohydrate antigen CA-125 and placental alkaline phosphatase which are used to differentiate and to monitor the response to therapy[3,4].

Case History

Mrs. Romana, 21 years, P=1 (NVD) housewife, reported to gynecologist with the history of lump in lower abdomen and amenorrhoea for 4 months. She had nausea, vomiting, abdominal discomfort after meal. She was a normally menstruating woman with average flow and duration. She had no family history of breast, ovary or colonic cancer or cancer related deaths. She was examined and found uterus of 16 weeks size and another palpable lump in the left lower abdomen about 12X12 cm, firm, non-tender with well-defined margin and overlying free skin. There was no ascites or palpable lymph node. Per vaginal examination revealed same features and a cleavage was found between uterus and palpable lump. So, clinical diagnosis of the case was 16 weeks pregnancy with left sided ovarian tumour. Ultrasonogram of the pelvic organs showed 16 weeks pregnancy with isolated hypoechoic solid mass in left adnexae. After proper counseling laparotomy was done to confirm the clinical and ultrasonic diagnosis and to provide definitive treatment. Left sided salpingo-oopharectomy was done preserving right ovary and gravid uterus as it was already 17+ weeks of pregnancy.

Histopathology revealed, it was a case of dysgerminoma. She was advised to attend Mohakhali Cancer Hospital and there her pregnancy was terminated by prostaglandin

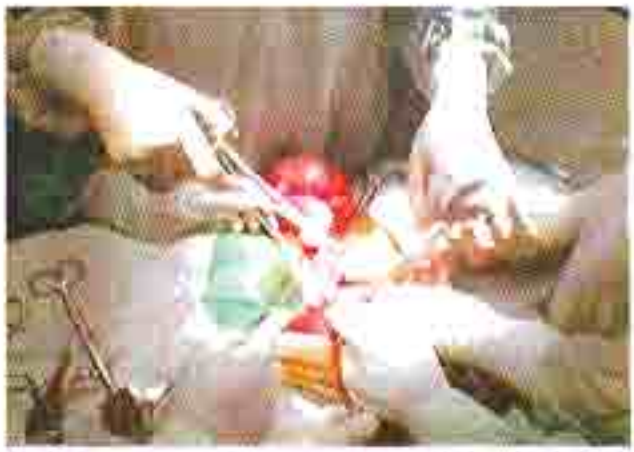

Fig-1: Operation of the ovarian tumour (dysgerminoma)

gel. Then she received 6 (six) cycles of combination chemotherapy.

Except for alopecia she had no other serious side effect. She was under regular follow up for the next six months. She conceived after this and had regular careful antenatal check up. Abdominal scan was done at 20 weeks and found everything normal. Seven days before her E.D.D she was admitted with early labour pain. Labour

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progresses were recorded in partograph and after 6 hours she delivered a healthy, male baby weighing 03 kg. She was discharged on next day and was advised to have USG and serum AFP after 6 weeks. She was then clinically evaluated once in every two months for the 1st year and every six months for the next year. Now she is on yearly follow up

Discussion

Dysgerminoma is one of the commonest malignant germ cell tumour of ovary. It is the counterpart of seminoma in male[5]. It is highly sensitive to both radiotherapy and chemotherapy. Typically, germ cells are encapsulated at birth within the primordial follicle. If they somehow escape encapsulation, cell death usually occurs. If the germ cells survive, rapid growth ensues, because no cellular context can provide normal contact inhibition, hence GCT formation. All dysgerminomas are considered malignant but only one third behave aggressively. The exact aetiology of dysgerminoma has not been determined[5].

This type of undifferentiated germ cell tumour needs pre-operative Karyotyping as 5% of all dysgerminomas are associated with genetic disorders[6,7]. Dysgerminoma usually has chromatin negative pattern[2,8]. Additional assays detecing transcription factors GATA- 4, Ihh, and BMP-2 is useful in differentiating between dysgerminoma and other germ cell tumours[9,10].

Macroscopically it is solid tumour, rubbery consistency and cut surface shows homogenous appearance.[5,6] Microscopically it mimic that of primitive gonad. Most of the germ cells are arranged in bundles or alveoli with central nuclei surrounded by undifferentiated stroma. Lymphocytes may invade the stroma and its presence favours a favorable prognosis[5]. Seventy five percent of ovarian cancer patients present in advanced stages III and IV, but a few presents in early stage along with other pathology[11,12]. Typically it develops as an insidious disease with few warning signs and symptoms. A history of nonspecific gastrointestinal complaints such as nausea, vomiting, dyspepsia, altered bowel habit, early satiety are the early features. Abdominal distension due to ascites, urinary disturbance, rectal discomfort, bowel obstruction are features of late and advanced disease[13]. With a few exceptions, those are fortunate patients who present in the early stage of this ovarian cancer. This patient was lucky enough to be symptomatic in early stage and got the benefit of modern treatment and showed excellent response. The treatment of choice includes removal of tumour with thorough exploration of intraabdominal organs and FNAC of opposite ovary if fascilities are available. Though sensitive to both chemotherapy and radiotherapy, radiotherapy is not given because of extensive destruction of soft structures like kidneys, intestine, and bladder. Combination chemotherapy used are: (i) Platinum based drugs: Cisplatin & its newer analogue Carboplatin. (ii) Anthracycline antibiotics: Bleomycin. (iii) Plant Alkaloid: Podophylotoxin such as Taxol or Paclitaxel[14,15]. Usually 6 cycles of such therapy are used and prognosis is excellent.

Conclusion

Dysgerminoma is malignant germ cells tumour. Early stage diagnosis, early laparotomy and histopathology, early starting of combination chemotherapy and critical follow up can make the patient almost cure.

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