Case history: A healthy pregnancy following chemotherapy for dysgerminoma
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Abstract
Dysgerminoma, a malignant germ cell tumour of the ovary develops in females, girls and young women in 2nd to 3rd decade. Usually diagnosed in early stage (Stage Ia), 90% cases unilateral, so conservative surgery followed by chemotherapy is the treatment of choice, specially in young patients who are desirous for children. Response to multiagent chemotherapy is excellent but careful and critical follow up is mandatory. The 5 years survival rate is > 90%. Even it is curable when diagnosed & treated in early stage. A case is documented here who had normal pregnancy and normal delivery after dysgerminoma 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 pre-pubertal girls. According to FIGO and WHO, germ cell tumour of the ovary constitutes 5-10% of all ovarian cancers and dysgerminoma constitutes 50% of all germ cell tumour and many of them produce biological markers like AFP, HCG, LH which is monitored to assess the response to therapy.

Seventy five percent (75%) of ovarian cancer patients present in advanced stages III and IV, but a few presents in early stage along with other pathology. Typically it develops as an insidious disease with few warning sings and symptoms. A history of nonspecific gastrointestinal complaints 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.

Figure: Operation of Dysgerminoma

Macroscopically solid tumour, rubbery consistency, cut surface shows homogenous appearance.

Microscopically mimic that of primitive gonad i.e. 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 favour a favorable prognosis.

The treatment of choice includes removal of tumour with thorough exploration of intraabdominal organs, FNAC of opposite ovary if facilities available. Though sensitive to both radio and chemotherapy, radiotherapy is not given because of extensive destruction of soft structures like kidneys, intestine and bladder.

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Combination chemotherapy used are:
1. Platinum based drugs: Cisplatin & its newer analogue Carboplatin.
3. Plant Alkaloid: Podophylotoxin such as Taxol or Paclitaxel used. Often 6 cycles of such therapy are used, prognosis is excellent.

Case history
Mrs. Romana, 21 years, P=1 (NVD) housewife, was attended to gynecologist with the history of lump in lower abdomen and amenorrhea 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 colon cancer or cancer related deaths. She was examined and found uterus 16 weeks size and another palpable lump about 12X12 cm firm, non-tender with well-defined margin and overlying skin was free. There was no ascites and no enlarged lymph nodes. Per vaginal examination revealed same features and a cleavage was found between uterus and palpable lump, so our clinical diagnosis was 16 weeks pregnancy with left sided ovarian tumour. Routine investigation including USG done which showed 16 weeks pregnancy with loculatted hypoechoic solid mass in left adnexae. After proper counseling laparotomy was done which showed right ovary completely healthy, so left sided salpingooophorectomy done preserving right ovary and intrauterine pregnancy as it was already 17+ weeks pregnancy. Histopathology revealed it is a case of dysgerminoma. So, she was advised to attend Mohakhali Cancer Hospital where she received 6(six) cycles of combination chemotherapy immediately after termination of pregnancy by prostaglandin gel.

Except for alopecia, diarrhoea, no other serious side effects occurred. She was under regular follow up for six months. She conceived after this and had also regular careful antenatal check up. Anomaly scan was done at 20 weeks and was found everything normal. Seven (7) days before her E.D.D she was admitted with early labour pain. Labour progresses were recorded in partograph and after 6 hours she delivered a healthy male baby, weight 3 kg. Apgar score and other reflexes of the baby were normal.

She was discharged on next day and was advised to have USG and serum AFP after 6 weeks. She was then clinically evaluated 3 monthly for the 1st year, 6 monthly for next year. Now she is on yearly follow up and is found completely ok.

Discussion
Dysgerminoma is one of the commonest malignant germ cell tumour. It is the adult counterpart of seminoma in male. It is highly sensitive to both radio and chemotherapy, with the introduction of newer combination chemotherapy that has largely superceded the radiotherapy, it is now almost a curable condition.

With few exceptions, those who are fortunate enough usually present in this early stage of ovarian cancer. Our patient was lucky enough that she was symptomatic in early stage, got the benefit of modern treatment and showed excellent response.

Dysgerminoma, an undifferentiated germ cell tumour, needs further tests for pre-operative diagnosis as transvaginal colour and pulsed Doppler USG, CT scan, Karyotyping (acquired in dysgenetic gonad/turner's syndrome if the person has a chromosome in her genotype but not others). Dysgerminoma usually has chromatin negative pattern.

So, early stage of tumour, unilateral, early laparotomy and use of combination chemotherapy plus critical follow up had made her pregnancy a successful one.

Conclusion
Dysgerminoma locally malignant germ cells tumour, 90% unilateral, early stage diagnosis, early laparotomy and histopathology, early starting of combination chemotherapy and
critical follow up can make the patient almost a cure.

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