ORIGINAL RESEARCH PAPER
Volume - 12 | Issue - 08 | August - 2023 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

TUBAL CHORIOCARCINOMA POST ECTOPIC PREGNANCY IN A 21YEAR GIRL – A RARE CASE REPORT.

Oncology/Radiotherapy

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ABSTRACT

Choriocarcinoma following ectopic pregnancy is an extremely rare and aggressive subtype of gestational trophoblastic neoplasia. The reported incidence of ectopic tubal choriocarcinoma is approximately 1.5/1,000,000 births. The clinical presentation usually mimics an ectopic pregnancy i.e., amenorrhea, vaginal bleeding, abdominal pain. Around 30% of patients presents with metastasis at the time of diagnosis with lung being the most common site of metastasis (80%). The gold standard for the diagnosis is histopathological examination which shows trophoblastic cells without chorionic villi invading muscle with extensive hemorrhage and necrosis. Serum beta hCG levels play an important role in establishing diagnosis, evaluate treatment response and early detection of relapse. Treatment includes surgical intervention followed by adjuvant chemotherapy based on risk stratification score. Though choriocarcinoma following non molar pregnancy are very aggressive, yet they have a favorable outcome if treatment is initiated early. Here we present a case of 21 year old young female with tubal choriocarcinoma post 2 months of ruptured ectopic gestation.

KEYWORDS

INTRODUCTION

Choriocarcinoma is an aggressive and rare subtype of gestational trophoblastic neoplasia (GTN) which arises from chorionic epithelium. Among patients with choriocarcinoma, 50% follows molar pregnancy whereas approximately 30% occurs after non molar pregnancies i.e., spontaneous abortion or an ectopic pregnancy[1]. GTN developing after non-molar pregnancy is always choriocarcinoma. The most common location of choriocarcinoma is intrauterine; however, rare locations such as the fallopian tube, ovary, and elsewhere in the abdomen and pelvis have been reported [2,3,4,5]. The reported incidence of ectopic tubal choriocarcinoma is approximately 1.5/1,000,000 births [6]. All trophoblastic tumors produce human chorionic gonadotrophin which is used to diagnose, monitor the effects of treatment and detect relapse. As serum hCG levels are not routinely obtained after non molar pregnancy, it may cause delay in diagnosis. Clinical manifestations include amenorrhea, abdominal pain or abnormal vaginal bleeding with or without features of metastatic disease. Here we present a case who had undergone a laparoscopic left sided salpingectomy for ruptured ectopic pregnancy and was later diagnosed to have the Choriocarcinoma.

Case Report

A 21 years old girl presented in ER with pain lower abdomen and bleeding per vaginum since 5 days. The girl had history of left salpingectomy for ruptured ectopic pregnancy 2 months back. Earlier, the sample was not sent for histopathological examination due to some personal issues. General physical examination was normal except pallor.

On per abdomen, a tender suprapubic mass was present and per speculum examination was normal. On per rectal examination, rectal mucosa was smooth and mobile and a mass of around 8x8 cm was felt compressing rectum. Urine pregnancy test was positive. Laboratory investigations showed anemia, normal LDH and AFP values whereas serum beta hCG levels were markedly elevated with a value of 5,75,100 IU.

CECT abdomen and pelvis was suggestive of a large 11x9x9.1cm mixed density lesion in pouch of douglas with peripheral enhancement n air foci within it. There was prominent vascularity posterior to lesion which caused mass effect on uterus, urinary bladder and rectum. Liver was normal. CECT thorax and brain was done and showed normal study.

Exploratory laparotomy was done and operative findings were suggestive of large broad ligament hematoma extending to pouch of douglas and involving left ovary which could not be separately visualized. Hematoma was drained followed by left oophorectomy and sent for HPE examination.

Histopathological examination showed large areas of necrosis and hemorrhage and tumor cells with marked pleomorphism arranged in sheets in syncytial pattern. On IHC staining, cells stained positive for beta hCG, inhibin, SALL-4, beta- Catenin, GATA-3, P63, MUC-4 with ki67 present in >90% of cells and these findings were consistent with choriocarcinoma.

Risk stratification was done by WHO scoring system based on prognostic factors and patient was categorized under low risk. Single agent chemotherapy based on inj methotrexate was started at the dose of 1mg/kg i/v on day 1,3,5,7 along with folinic acid per orally on day 2,4,6,8. The cycle was repeated every 2 weeks until the beta hCG values came normal followed by 2 more cycles. Patient is now regularly followed by beta hCG levels.

DISCUSSION

Choriocarcinoma is highly malignant gestational trophoblastic neoplasia arising from chorionic epithelium. It can be gestational or non-gestational, amongst which gestational is the most common. Non gestational choriocarcinoma is very rare, not associated with pregnancy and can arise from germ cell or trophoblastic differentiation in different types of carcinomas [7]. It can occur at any age and in any gender, including males and children. In our case report, young patient presented with gestational choriocarcinoma after 2 months of ectopic pregnancy. Gestational choriocarcinoma occurs most commonly following molar pregnancy, but can also occur after spontaneous abortion or ectopic pregnancy. The most common site is intrauterine , however can occur at various other extrauterine sites e.g, fallopian tube, ovary , peritoneum. Choriocarcinoma after an ectopic pregnancy (0.76% to 4%) is a rare entity. The reported incidence of ectopic tubal choriocarcinoma is approximately one in 5333 tubal pregnancies and 1.5/1,000,000 births.

The clinical presentation are usually similar to those of an ectopic pregnancy i.e, amenorrhea, vaginal bleeding, abdominal pain, and adnexal mass but sometimes can mimic other clinical conditions like Hemorrhagic ovarian cyst, Tubo-ovarian abscess or Ovarian torsion. As tubal choriocarcinoma is very aggressive disease, around 30% of patients presents with metastasis at the time of diagnosis. Lung is the most common site of metastasis (80%) followed by vagina (30%), liver and brain (10%).

Imaging helps in establishing diagnosis but the gold standard for diagnosing choriocarcinoma is the histopathological evaluation. There will be columns of trophoblastic cells without chorionic villi separated by coagulated blood that invades muscular tissue with extensive necrosis and hemorrhage. IHC staining shows tumor positive for hCG, HSD 3B1, cytoberation A1/AE3, high Ki67, HLA-G, MUC 4 and Mel-CAM and negative stain for PLAP.

In our case histological examination showed tumor cells with marked pleomorphism arranged in sheets and syncytial pattern with large areas of haemorrhage and necrosis. Tumor cells stained positive for beta hCG, inhibin, SALL-4, beta catenin, GATA-3 with high ki-67 index of >90%. Combination of P57KP2 immunostaining and DNA polymorphism analysis helps in differentiating gestational from non-gestational choriocarcinoma.

Serum beta hCG level is an important diagnostic tool as well as monitoring tool for treatment response and detection of relapse. Its level are usually raised three to 100 times higher than the normal range in pregnancy. Choriocarcinoma including those arising in an ectopic location, is highly responsive to chemotherapy, even in advanced stages. Line of treatment includes tumor resection followed by adjuvant chemotherapy using single or combination drugs depending on risk stratification score.

Risk stratification is done by WHO scoring system based on various prognostic factors i.e, age of patient, nature of antecedent pregnancy and its time interval, pre-treatment serum beta hCG levels, tumor size, number and sites of metastases and prior failed chemotherapy. Based on above parameters patient is classified as low risk (WHO risk score < 7) or high risk (WHO risk score=> 7). Patients with low risk are treated with single agent chemotherapy i.e, methotrexate or actinomycin D whereas patients that come under high-risk category are treated with multi agent chemotherapy i.e, EMACO regimen, EMAEP regimen.

In our case patient was having low risk features and was treated with single agent inj methotrexate. Serum beta hCG levels were regularly monitored through the course of treatment which showed a declining trend followed by normal level. Choriocarcinoma after ectopic pregnancy is more aggressive with more likelihood of metastasis than choriocarcinoma post molar pregnancy. Early surgery and initiation of chemotherapy offers favourable outcomes.

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