Gestational Trophoblastic Disease in Ectopic Pregnancy: A Case Report with Review of Literature

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Abstract

Gestational trophoblastic disease associated with ectopic pregnancy is a rare event and persistent trophoblastic disease is a well recognized complication of conservative surgical treatment for ectopic pregnancy but rarely secondary trophoblastic implantation may occur after salpingectomy.

This is a case report of a rare and unusual presentation of persistent trophoblastic implantation following salpingectomy for ruptured ectopic pregnancy. The patient was admitted as an emergency with acute abdomen in severely shocked state. She underwent urgent laparotomy with right salpingectomy for ruptured tubal pregnancy with massive haemoperitonium. Postoperative period was smooth but one month following the operation she developed generalized nonspecific symptoms with high serum BHCG titer which was (50000 IU). Patient had been transferred for the territory trophoblastic disease centre for further follow up. She was kept on combination regimen of chemotherapy.

This case presentation was analyzed with other reported case series of the same problem. The analysis of the cases showed that most patients presented with abdominal pain. Some may have vaginal bleeding. Haemoperitonium was the most frequent surgical finding.

It is concluded from this case with other previous reported cases that strict histological criteria should be applied for the diagnosis of gestational trophoblastic disease when a sample of ectopic pregnancy is analysed in addition to careful monitoring and follow up of all cases of ectopic pregnancy with serum Human Chorionic Gonadotrophin after surgical treatment.

Introduction

Gestational trophoblastic disease (GTD) defines a group of conditions that arise from an aberrant fertilization event. It is a proliferation of trophoblastic tissue in pregnant or recently pregnant women and considered as a tumor originating from the trophoblast which surrounds the blastocyst and develops into chorion and amnion. The resulting proliferate process has the potential to develop into invasive malignant neoplasm. The spectrum of (GTD) includes:

1. Hydatidiform mole (Molar pregnancy): The most common form of gestational trophoblastic neoplasm with an incidence varying between 1:100 in Indonesia and 1:1000 in USA. In this abnormal pregnancy, villi become oedematous (hydropic) and trophoblastic tissue proliferates. It may be complete or partial. The vast majority of complete hydatidiform moles are diploid and androgenic, whereas partial hydatidiform moles are triploid, with an extra set of chromosomes of placental origin.

2. Choriocarcinoma destruens (invasise mole): It occurs in 2-5 % of all cases of gestational trophoblastic neoplasia. Its incidence is 1: 40000 pregnancies and higher in the orient. It is believed to follow hydatidiform mole in 50% of the cases and therapeutic abortion in 25%.

3. Epithelioid trophoblastic tumor: Very rare type of gestational trophoblastic disease and very similar to choriocarcinoma. It invades the myometrium in an expansile rather than permeative growth.

4. Placental site trophoblastic tumor: This is the rarest type of gestational trophoblastic disease and consists of intermediate trophoblastic cells that persist after a term pregnancy it may invade adjacent tissues or metastatize.

Choriocarcinoma accounts for 5% of gestational trophoblastic neoplasia and arises in 5% of patients with the previously existing molar pregnancy. This invasive, usually widely metastatic tumor is composed of malignant trophoblastic cells and lacks hydropic villi, most of these tumors developing after a hydatidiform mole. The incidence of choriocarcinoma is one in 20,000 pregnancies and the more abnormal the pregnancy the more likely is that this will occur. It occurred in: 1/160,000 normal gestations, 1/5333 ectopic pregnancies and 1/40 molar pregnancies.
disease and it is most commonly caused by malignant transformation of a molar pregnancy. It can develop after all types of pregnancy including normal term pregnancy, spontaneous miscarriage and ectopic pregnancy. The most common site is intrauterine however rare locations such as fallopian tube, ovary and elsewhere in the abdomen have been reported. The diagnosis of gestational trophoblastic disease is based on the evaluation of the clinical symptoms, measurement of B – subunit of human Chorionic gonadotrophin (B HCG) and characteristic sonographic findings. However, the histopathological examination of products of conception remains the current gold standard for the identification. These typical diagnostic features are usually identified with intrauterine gestational trophoblastic disease.

The atypical and non specific features of extrauterine gestational trophoblastic disease present difficulty in diagnosis as these conditions may mimic the usual symptoms of ectopic pregnancy, especially when a haemoperitoneum is present.

It is stated that conservative surgical treatment for tubal ectopic pregnancy, salpingotomy is associated with a well recognized complication of incomplete removal of trophoblastic tissue. However gestational trophoblastic disease should be considered even following salpingectomy due to secondary trophoblast implantation.

This is a report of an unusual and rare case of persistent gestational trophoblastic disease after tubal pregnancy. This case shows that persistent trophoblastic disease can occur not only after conservative treatment for tubal pregnancy but even after salpingectomy.

Case Report(s)

A 35-year old female, gravida 4, para 3, presented to the emergency unit with acute intense abdominal pain in the right lower quadrant with an amenorrhea of 5 weeks. The physical examination was remarkable for severe circulatory collapse. The patient was restless, anxious, sweaty, and pale. Blood pressure was 70/40 mm Hg, pulse rate was 110/min and weak. Abdominal Examination showed generalized tenderness with guarding and rigidity. Bowel sound was sluggish. Pelvic examination revealed a bulky uterus with a positive cervical excitation. Pregnancy test was positive. Pelvic sonography revealed a uterus without an obvious gestational sac with a complex hypoechoic mass on the right adnexa with sign of massive intraperitoneal bleeding which concluded the diagnosis of ruptured right sided tubal pregnancy.

During preparation of the patient for the operation initial resuscitation was done with intravenous fluid with Ringer Lactate and prophylactic antibiotics. Blood sample was sent for urgent cross matching of 4 units of blood. The blood group of the patient was AB-ve.

An urgent exploratory laparotomy was done under general anesthesia. The patient was found to have severe and extensive haemoperitoneum. There was a complex mass on the right fallopian tube with extensive hemorrhage and necrosis of the tissue, the tube was completely distorted. The left ovary and tube were normal. Uterus was just bulky. Salpingectomy was done for the right tube and the specimen was sent for histopathological examination. Peritoneal wash was done and the abdomen was closed without peritoneal closure.

The patient received two units of blood during the operation. She had a smooth recovery from anaesthesia with an uneventful postoperative period. AntiD immunoglobulin injection was given. She was discharged in a stable condition on the third postoperative day.

Outpatient follow up of the patient in the seventh postoperative day revealed a healed wound with mild lower abdominal pain. Abdominal and pelvic examination excluded significant abnormalities. Serum was tested for B subunit of human chorionic gonadotrophin (BHCG) titer. The result was 50000 IU.

In view of the result of high serum BHCG titre the patient was referred for a trophoblastic disease centre for further assessment and follow up. She was considered as a case of malignant form of gestational trophoblastic disease and kept on combination regimen of chemotherapy in the centre.

Discussion
Partial or complete hydatidiform mole affects approximately one in 500 to 1000 pregnancies. Tubal ectopic hydatidiform moles are rare lesions and only 40 cases have been reported in the world literature. Cortes Chary et al investigated six cases of gestational trophoblastic disease in ectopic pregnancy during (1996-2004). The study concluded that the prevalence of gestational trophoblastic disease in ectopic pregnancy was 0.16:1000 deliveries. It was found that haemoperitoneum was the most frequent surgical finding and the condition can mimic the usual symptoms of ectopic pregnancy. It was recommended that strict histological criteria should be followed when a sample of ectopic pregnancy is analysed with careful monitoring of patients with serial measurement of human chorionic gonadotrophin.

The clinical characteristics of ectopic molar pregnancy depend upon the site of the disease. It can be metastasized distally in early stage. Angiography, colour ultrasound and laparotomy may play a very important role in the diagnosis. Sabire NJ et al stated the pathologist should be aware that the degree of extravillous trophoblastic proliferation may appear more florid in ectopic gestation as compared with evacuated uterine products of conception. Hence molar pregnancy should be diagnosed with strict morphological criteria. These include: circumferential trophoblastic proliferation, hydropic and scalloped villi and srtomal karyohexis.

The diagnosis of molar pregnancy in extrauterine location is challenging. In the present case as in other previously reported cases there was a delay in the initial diagnosis because of the non specific symptoms, in addition to the difficulty to differentiate the rare malignant form of trophoblastic disease from the more common ectopic pregnancy in a lady with a positive pregnancy test and massive haemoperitoneum. The rarity of the true diagnosis in this case may be a reason of delay in identifying the presence of metastatic disease and starting chemotherapy with resultant increased morbidity.

It is difficult to predict accurately the clinical behavior of extraterine gestational trophoblastic disease in our patient. The typical sonographic appearance of intrauterine malignant trophoblastic disease is a large heterogenous mass occupying uterine cavity and in extrauterine location of any origin the findings may show larger hypervascular heterogenous mass. The heterogenesity may represent the abundant haemorrhage and necrosis. The hypervascularity found on sonography is consistent with vascular nature of Choriocarcinoma. However, the literature revealed that a paucity of imaging findings in patients with extrauterine choriocarcinoma. Serial measurement of serum (BHCG) titre was the most useful method of diagnosis and follow up and it is considered as an effective investigation to differentiate ectopic pregnancy from trophoblastic disease.

This case stresses the important role of histopathological examination of establishing the diagnosis and close follow-up of all cases of ectopic pregnancy with human chorionic gonadotrophin level to exclude persistent and malignant trophoblastic disease which may be a life threatening condition.

**Conclusion**

This case illustrates that the management of ectopic pregnancy can prove to be difficult even if the initial diagnosis is obvious. It shows that persistent trophoblastic disease can occur not only after salpingotomy but also after salpingectomy. It is recommended that strict histological criteria should be followed for the diagnosis of tubal pregnancy with careful monitoring of all cases with serum beta human chorionic gonadotrophin. During laparotomy thorough examination of the pelvis and abdomen is mandatory to exclude metastasis.

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