Case Report

Atypical presentation of uterine choriocarcinoma a case report with review of literature

Rajshree Dayanand Katke[1,2,3]

[1]Department of Obstetrics and Gynecology, [2]Medical Superintendent, Cama and Albless Hospital, Grant Government Medical College, [3]Sir J. J. Group of Hospitals, Mumbai, Maharashtra, India

ABSTRACT

Gestational trophoblastic diseases include complete and partial molar pregnancy, invasive mole, placental site trophoblastic tumor, and choriocarcinoma. Gestational choriocarcinoma is one of the most malignant form of a group of tumors. Although choriocarcinoma has a very high propensity to metastasize to various sites including brain it also has a very high cure rate. Our study represents the case of choriocarcinoma developed after primary invasive mole which was treated successfully with combined surgical and medical management. We now present a course of gestational trophoblastic disease transforming from benign to a malignant condition in due course of management. We are presenting a case of a 26-year-old female who came to us with molar pregnancy which turned out be invasive mole on histopathological examination and converted into choriocarcinoma in due course of treatment even after methotrexate chemotherapy.

Key words: Chemotherapy, choriocarcinoma, gestational trophoblastic disease, invasive mole

INTRODUCTION

Choriocarcinoma also known as chorioblastoma or trophoblastic tumor is a rare form of cancer which occurs in the female genital tract and is commonly associated with pregnancy. It may develop after a normal pregnancy; however, it is usually associated with molar pregnancy, ectopic pregnancy, miscarriage, or abortion. Gestational choriocarcinoma is highly malignant tumor with a very high propensity to metastasize to various sites including lungs, vagina, brain, liver, kidney, and gastrointestinal tract, in descending order of frequency. These cases present with vaginal bleeding, anemia, hyperemesis gravidarum, hyperthyroidism, uterine and ovarian enlargement, and pregnancy-induced hypertension.

The ultimate cause of gestational trophoblastic disease is claimed to be genetic in origin. No environmental etiological factor has been implicated up to now apart from deficient Vitamin A precursor carotene in the diet.[1]

The precise molecular pathogenesis of gestational trophoblastic disease is yet to be elucidated. Genetics has a well-established role.

CASE REPORT

A 26-year-old female married for 9 years G3 P2 L2 with 6 weeks gestation came with complains of bleeding per vaginum since 2 days and pain in abdomen on and off since 1-month. Patient was thin built, vitals were normal,

Address for correspondence: Dr. Rajshree Dayanand Katke, Department of Obstetrics and Gynecology, Cama and Albless Hospital, Grant Government Medical College, Sir J. J. Group of Hospitals, Mumbai - 400 001, Maharashtra, India.
E-mail: drrajshrikatke@gmail.com

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mild pallor with no evidence of any other abnormality found on general examination. Her systemic examination revealed normal findings of cardiovascular and respiratory system. Perabdominal examination, abdomen was soft with no guarding, tenderness or rigidity. Perspeculum examination, the cervix was congested with minimal bleed and per vaginum examination suggestive of uterine size of 10–12 weeks size and fornices were free. Patient's ultrasound examination done was suggestive of incomplete abortion. Patient was taken for curettage, and the grossly product of conception appeared to be multiple fluid-filled vesicles, specimen was sent for histopathological examination, which came out to be vesicular mole, with few interspersed myometrial cells suggesting the diagnosis of invasive mole. Patient's beta human chorionic gonadotropin (B-HCG) levels were more than 200,000 IU/ml. Patient was kept under observation and serial B-HCG monitoring done, which reduced gradually to 130,000 mIU/ml after 15 days of curettage. As the patients B-HCG levels were in high range, patient was started on prophylactic methotrexate chemotherapy and was given five doses of 50 mg methotrexate with alternate day of folinic acid injections. Postmethotrexate completion the B-HCG levels were 71384 mIU/ml, after 15 days it became 23937 mIU/ml. Postoperative ultrasound showed no evidence of retained products of molar pregnancy and the ovaries also were normal.

Her thyroid-stimulating hormone value was in the range of 0.05 mIU/ml (normal range: 0.3–5.5), hence patient was started on antithyroid drug with serial thyroid profile monitoring.

After 25 days postchemotherapy, the patient suddenly presented with severe bleeding per vaginum and anemia with hemoglobin level of 6.5 g%, hence patient was given 2 units of blood transfusion. B-HCG levels were 49825 mIU/ml. Bulky uterus with fundal mass of 3 × 2 cm size.

Patient was started on the second cycle of chemotherapy with methotrexate, after four doses of methotrexate B-HCG level was 28069 mIU/ml. The ultrasound with color Doppler scan showed entire myometrium replaced by large vascular spaces with supply from the right uterine artery and flow simulating arteriovenous shunting with no surrounding adherence which is suggestive of recurrence or flared up lesion. All these findings were exactly similar to prechemotherapy findings [Figure 1]. Her magnetic resonance imaging findings were highly vascular fundal mass in the endometrial cavity with myometrial invasion reaching up to serosa at some places with no extraserosal spread. Fat planes with surrounding organs were preserved [Figure 2].

Meanwhile the patient's thyroid profile came to be within normal range hence antithyroid drugs were tapered.

As patient appeared to be not responding to treatment and continuously symptomatic and bleeding per vaginum, possibilities of invasive mole or choriocarcinoma explained to the relative. As there was no satisfactory response to chemotherapy and patient had heavy bout of bleeding the decision of hysterectomy was taken. Total abdominal hysterectomy was done under spinal anesthesia. Intraoperative findings were flabby, soft uterus with many blood filled spaces subserosally, no extraserosal spread apparent. Rest of the pelvic organs were normal. Ovaries were normal looking. On gross,

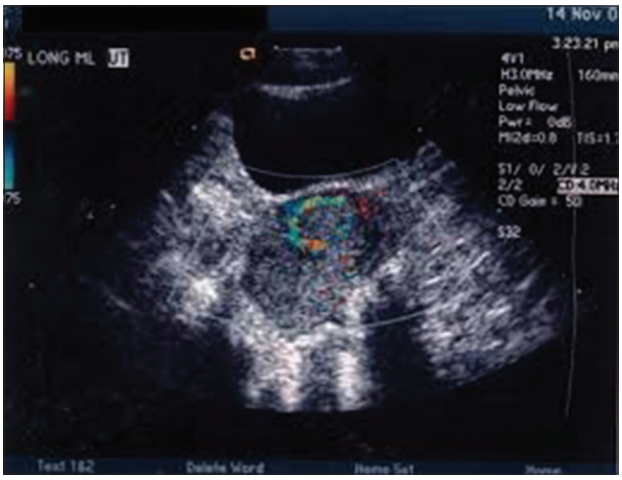

Figure 1: Colour Doppler of uteerus (original)

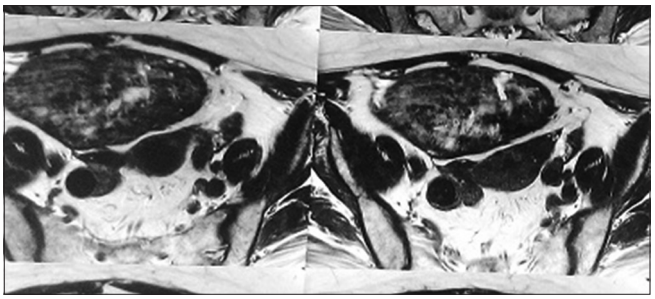

Figure 2: MRI PELVIS (original)

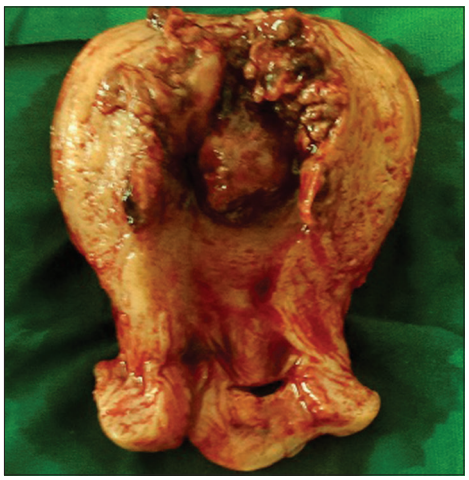

Figure 3: Gross appearance of specimen (original)

the specimen showed bulky, soft, and congested uterus [Figure 3].

On cut section, it showed polypoidal mass of 2 cm × 2 cm arising from the fundal area of the uterus approaching into the uterine cavity. Histological picture shows the groups of cytotrophoblast and syncytiotrophoblast interspersed with myometrium with areas of necrosis and hemorrhage. Histopathological report confirmed the diagnosis of choriocarcinoma [Figure 4].

Based on the medical oncologist's consultation the patient received two cycles of chemotherapy, postchemotherapy B-HCG level came out to be 6.0 mIU/ml patient withstood well with surgery and recovered well. Patient discharged from hospital. At present, she is living normal and healthy life. Follow-up B-HCG levels are in normal range and ultrasound showed healthy postoperative status with normal thyroid values.

DISCUSSION

Gestational trophoblastic neoplasia almost always develops with or follows some form of recognized pregnancy. Most follow a hydatidiform mole but neoplasia may follow pregnancy, abortion, or even an ectopic pregnancy.[2,3]

Choriocarcinoma also known as chorioblastoma or trophoblastic tumor is a rare form of cancer which occurs in the female genital tract and is commonly associated with pregnancy. It may develop after a normal pregnancy; however, it is usually associated with molar pregnancy, ectopic pregnancy, miscarriage, or abortion. Invasive mole is locally invasive, but generally lack the pronounced tendency to wide spread metastasis.

Choriocarcinoma is extremely malignant tumor with the incidence of 1 in 30000 pregnancies and only one-third of it develops after a normal delivery and one-third after molar pregnancy. Metastasis often develops early in choriocarcinoma and is generally blood borne and most common sites are lungs and vagina. Ovarian theca lutein cysts are identified in one-third of such cases. Placental site trophoblastic tumors are a rare variant characterized by prolactin producing intermediate trophoblast with relatively low B-HCG, a high proportion of free B-HCG, chemo resistant, and hysterectomy, being the best treatment. Epithelioid tumors are rare characterized by nonconformation of preceding pregnancy, nodular growth, and microscopically resembles placental site tumors, but the cells are smaller and display less pleomorphism. Invasive mole is associated with multiple complications such as hyperthyroidism, hyperemesis gravidarum, and preeclampsia, but early diagnosis and intervention helps in the prevention of these complications.

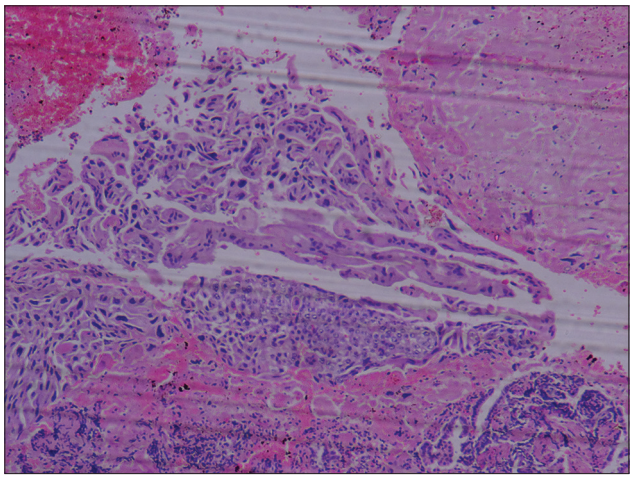

Figure 4: Histological appearance of choriocarcinoma (original)

Preoperative X-ray chest hemogram, baseline B-HCG, blood grouping, liver enzymes done routinely before suction Evacuation.[4] It is also an important adjunct to the treatment of chemo-resistant tumors. Chemotherapy is now the established method of treatment of choriocarcinoma and hysterectomy and surgical resection of the tumor is rarely required in cases resistant to chemotherapy.[5,6] Nongestational choriocarcinoma also occurs and is usually resistant to therapy.[7]

CONCLUSION

Our case report emphasizes that persistent trophoblastic disease needs to be defined precisely and also the judicious use of methotrexate with surgical intervention at proper time in management of persistent trophoblastic disease is the key to 100% survival in gestational trophoblastic neoplasia. Furthermore, early diagnosis by ultrasound and histopathological examination is the key to avoid associated complications such as hyperemesis gravidarum, hyperthyroidism, and preeclampsia. Our case also proves that the clinical presentation of hydatidiform mole has changed in recent years and fewer current patients as compared to historic control presented with traditional symptoms of molar pregnancy (large uterine size, hyperemesis gravidarum, anemia, preeclampsia, and hyperthyroidism).

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Conflicts of interest

There are no conflicts of interest.

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