

Live Birth Possible Following Invasive Mole: A Case Report

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1. Abstract

Gestational trophoblastic disease includes benign and malignant spectrum of tumors. It is a disease of chorion in which proliferation of syncytiotrophoblast and cytotrophoblast occur. Invasive mole is a common manifestation of malignant form of tumors others been persistent H-mole, choriocarcinoma, placental site trophoblastic tumor and epithelioid trophoblastic tumor. It is locally invasive and destructive, however shows high cure rate. Our case represents a classical presentation of invasive mole, its course of management followed by pregnancy outcome in subsequent years that clearly suggests that with the advancement in chemotherapy as a treatment modality, prognosis and quality of life for the patients have increased immensely. Gestational trophoblastic neoplasm is not associated with reduced fertility however time duration after chemotherapy and between conceptions is a matter of concern.

2. Introduction

Gestational trophoblastic disease is sub-divided into molar and non-molar tumors. Non-molar tumors are grouped as Gestational Trophoblastic Neoplasia (GTN) [1]. GTN are classified histologically into three distinct subgroups - invasive mole, choriocarcinoma, and Placental Site Trophoblastic Tumor (PSST) and epithelioid trophoblastic tumor. Invasive Mole (IM) is a common manifestation of GTN characterized by excessive trophoblastic overgrowth and invasion of molar tissue (complete or partial mole) into myometrium or uterine vasculature [2]. These tissues show abnormal penetration deep into the myometrium sometimes involving the peritoneum or vagina. They are locally invasive and have dramatic presentation. Provisional diagnosis is made clinically and radiologically and further confirmed on histology. Presence of hyperplastic trophoblastic cells with villus structure penetrating the myometrium in histology confirms the diagnosis [3]. It comprises of about 15% of all GTN.

The most common symptom of invasive mole is persistent vaginal bleeding even after evacuation of molar pregnancy, others are sub involution of uterus, persistent rise/plateau in β HCG titer in a laboratory test. FIGO staging and risk scoring of prognostic factors help in determining the management of GTN. HCG level (>100000 mIU/ml), excessive uterine enlargement, theca lutein cyst size ≥ 6 cm are considered to be at higher risks for developing post molar tumors (high risk mole). Here, we present a case of invasive mole in a young patient in whom complete remission was achieved with chemotherapy followed by evident report on preserved fertility and live issues with no congenital anomaly.

3. Case Presentation

5yrs back, in March 2015, a 21yrs primigravida presented to gynecology OPD of a tertiary care Centre with history of bleeding per vaginam since 2 months and excessive vomiting, not responding to medications. She had first visited a hospital 15 days back with amenorrhea of two months followed by bleeding per vaginam and underwent D&E. Histo-pathology showed complete molar pregnancy. At the time of examination, her uterine size was corresponding to 10 weeks gravid uterus. Her β hcg level was 37260 mIU/ml and TSH: 0.15. USG Abdomen showed enlarged uterus (14.8x 6x10.2) with heterogenous texture of myometrium with multiple anechoic area with low resistance arterial and venous flow on color doppler with B/L multi-loculated ovarian cysts (7x7cm), likely to be gestational trophoblastic disease. Rest of the investigations were normal. Suction evacuation was performed on her.

Histopathological examination revealed abnormal (dysmorphic) chorionic villi and extravillous trophoblast seems invading surrounding tissue with mild to severe atypia. Villi are less hydropic than non-invasive mole and diagnosis of invasive mole was made (Figure 1).

Final diagnosis of the patient was GTN, low risk, WHO score 4 and planned for chemotherapy.

She received 7 cycles of: inj. methotrexate 1mg/kg i.m with inj folic acid 0.1mg/kg in 100ml NS i.v alternate days for 4 days each. Patient was monitored by serial β -HCG, which showed decreasing trend by log10 with chemotherapy with pre-evacuation – 37260 mIU/ml and post evacuation – 10683 mIU/ml

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Adequate response was observed after chemotherapy up to 6th cycles beyond which a plateau in β HCG was seen as shown in the graph. Therefore, Actinomycin -D was given for the 8th cycle in dose of 1.25mg/m2. Patient responded well and follow- up β HCG was <4 mIU/ml (Figure 2).

During the course of treatment, she had intermittent per vaginal bleeding otherwise stayed asymptomatic and tolerated chemotherapy well. She opted for OCP as a method of contraception post chemotherapy.

Patient was counseled and asked to follow up weekly with her β HCG for 3weeks then monthly for next one year. However, she conceived within a year of her treatment due to her irregular pill intake. She conceived spontaneously. Her antenatal period was uneventful with ultrasonographic report to be normal. She delivered a full term healthy baby of 2.4 kg via LSCS in february'17 in view of fetal distress. Histo-pathological examination of placenta showed well vascularized villi and trophoblastic tissue and no features of invasion.

She delivered her 2nd and 3rd child delivered via LSCS at term in 2019 and march '2021 respectively. Both babies were healthy and no congenital anomaly was seen in all three children.

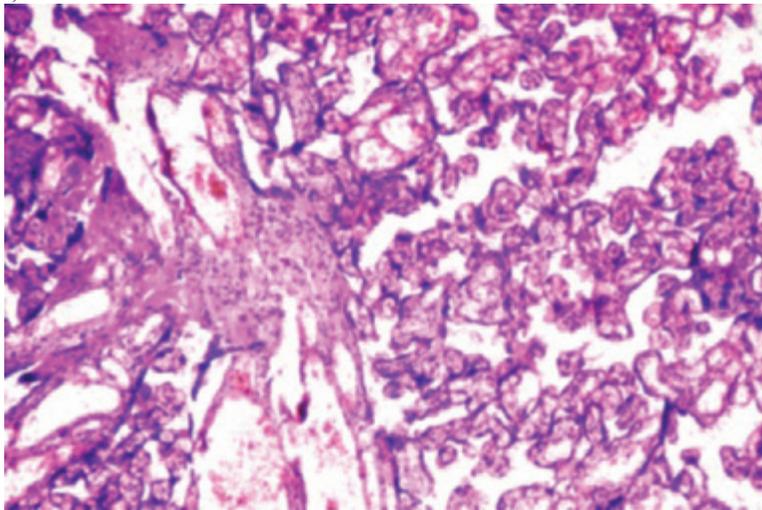


Figure 1: Histo-pathology slide (10 X) of the patient

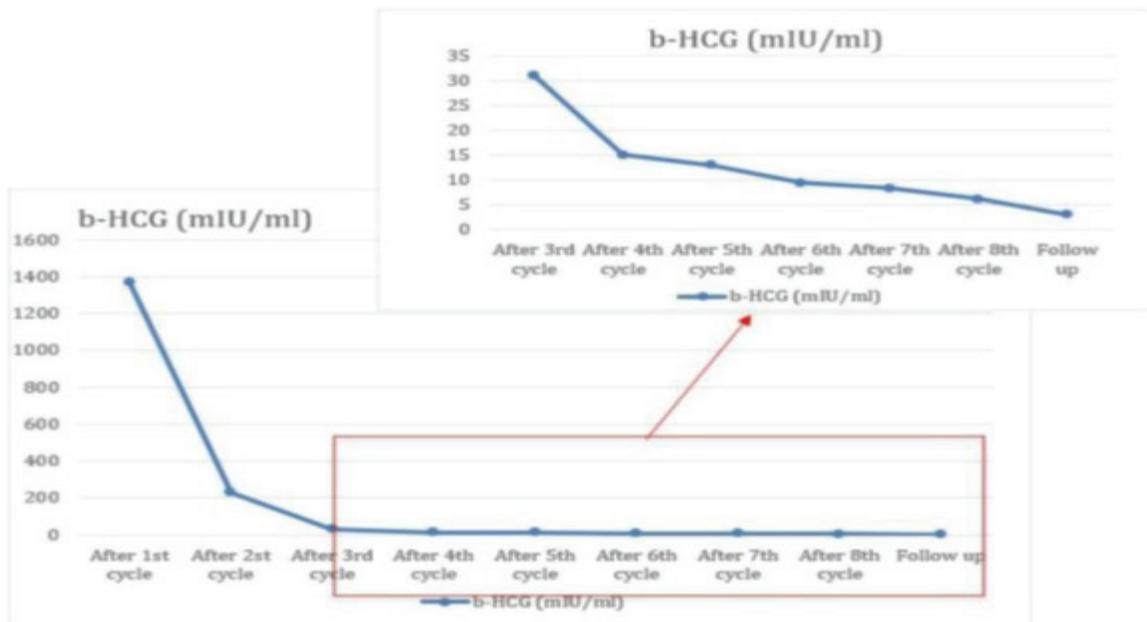


Figure 2: Trend of β - HCG with chemotherapy

4. Discussion

Hydatidiform mole is a disease of chorion. Most hydatidiform moles regress after suction evacuation, and the serum and urine HCG levels rapidly returns to normal in 7-9 weeks. However, 5-15% cases progress to GTN.

Ultrasonography along with color doppler has become the standard protocol in diagnosis of suspected GTN further confirming the diagnosis histopathologically. It typically exhibits solid with focal cystic vascular spaces (honeycomb appearance) within myometrium with loss of endometrium myometrium interface. Color doppler helps in the assessment of neovascularization and shows increased blood flow.

Invasive mole responds well to the treatment with chemotherapy. Patients should be followed with weekly quantitative β HCG levels until normal for three consecutive weeks followed by monthly evaluation for 12 months. Dilatation and curettage are not considered due to the risk of uterine perforation. Complete remission can be achieved with chemotherapy in most low-risk cases and even in disseminated disease with almost 100% survival. Hysterectomy is saved for patients with old age, resistance to chemotherapy, poor compliance and completed family size.

It is important to know that having a GTN does not increase risk of having an abnormal baby. Even after chemotherapy chance of having a healthy baby is similar to any other women of the same age group however clinical surveillance should be done.

In a study done in Brazil which included 18 articles that evaluated outcomes after chemotherapy in GTN. The pregnancy rate with single agent chemotherapy was higher than combination chemotherapy. It also showed increased rate of abortion (12%), stillbirth (1.4%) and repeat molar pregnancy (7%) in patients who conceived within 6months after chemotherapy. The abortion rate in combination chemotherapy group was higher than in with single agent in one study however no significant difference in other 3 studies were observed. There was no increase in congenital abnormality [4].

In another study conducted in Iran from 2006-2015, a total of 44 patients with GTN were included in the study. It showed 18 full term live births, 4 premature deliveries, 1 still birth, 1 abortion and no ectopic pregnancies [5]. The effect of chemotherapy (single and combination drugs) on ovarian reserve and subsequent pregnancies have been studied. In GTN, the secondary infertility following chemotherapy is approximately 7% with congenital anomaly in infants about 1.8%. However, this rate is comparable to the general population and hence, do not appear to increase the rate of congenital anomalies following chemotherapy [6]. Moreover, Woolas et al, noted no differences in subsequent pregnancy and outcomes in female treated with single/combination chemotherapy in GTN [7].

Our case report evidently suggests no increased risk in congenital anomaly following complete remission in a case of GTN.

5. Conclusion

The prognosis of patients with GTN is changed with the introduction of fertility sparing treatment with chemotherapy. GTN is not associated with reduced fertility in subsequent pregnancy. However clinical surveillance and use of contraception for at least 1year becomes mandatory as conception before is associated with increased risks to complications. Our case report emphasizes that with precise diagnosis and judicious management the patients can have 100% survival with fertility spared in subsequent pregnancies.

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