

# Live Birth following Treatment of Metastatic Cerebral Choriocarcinoma

<sup>1</sup>Arti Sharma, <sup>2</sup>Vineeta Gupta, <sup>1</sup>Anuja Nanda, <sup>3</sup>Priyanka Choudhary, <sup>4</sup>Sandip Kudesia

<sup>1</sup>Assistant Professor, Department of Obstetrics and Gynecology, Shri Guru Ram Rai Institute of Medical and Health Sciences Shri Mahant Indires Hospital, Dehradun, Uttarakhand, India

<sup>2</sup>Professor and Head, Department of Obstetrics and Gynecology, Shri Guru Ram Rai Institute of Medical and Health Sciences Shri Mahant Indires Hospital, Dehradun, Uttarakhand, India

<sup>3</sup>Senior Resident, Department of Obstetrics and Gynecology, Shri Guru Ram Rai Institute of Medical and Health Sciences Shri Mahant Indires Hospital, Dehradun, Uttarakhand, India

<sup>4</sup>Professor and Head, Department of Pathology, Shri Guru Ram Rai Institute of Medical and Health Sciences Shri Mahant Indires Hospital, Dehradun, Uttarakhand, India

**Correspondence:** Arti Sharma, Assistant Professor, Department of Obstetrics and Gynecology, Shri Guru Ram Rai Institute of Medical and Health Sciences, Shri Mahant Indires Hospital, Dehradun-248001, Uttarakhand, India, Phone: 0135-2522160 9411560462, e-mail: artishubh@yahoo.com

## ABSTRACT

Choriocarcinoma is a malignant tumor of trophoblastic tissue and constitutes about 30 to 40% of the trophoblastic neoplasia cases. Early hematogenous spread is characteristic of choriocarcinoma. We report a case of metastatic cerebral choriocarcinoma in a 23-year-old female with appearance of acute neurological signs following spontaneous intracerebral hemorrhage as the initial presentation. She underwent successful treatment of choriocarcinoma with chemotherapy (EMA-CO regime) and was able to have normal baby with good apgar score. The case emphasizes the importance of suspecting an underlying choriocarcinoma in women of child bearing age group presenting with spontaneous cerebral hemorrhage and an uncomplicated term delivery can be expected after complete chemotherapy for GTN.

**Keywords:** Choriocarcinoma, Live birth, Pregnancy outcome.

## INTRODUCTION

Choriocarcinoma, one of the components of gestational trophoblastic neoplasia (GTN), is a curable malignancy. Patients with metastatic disease or a FIGO risk score of >7 have high-risk disease. Aggressive treatment with multi-agent chemotherapy is an important component for management of these patients. Treatment of malignant GTN with chemotherapy is compatible with the preservation of fertility and is not associated with an increased risk of congenital malformations.

## CASE REPORT

A 23-year-old lady presented in emergency with headache and projectile vomiting followed by left-sided hemiparesis. She gave history of medical abortion of 6 weeks pregnancy using mifepristone and misoprostol combination procured from a chemist 6 months prior to her present symptoms.

Contrast-enhanced computerized tomography (CT) head revealed a 5.8 × 3.4 cm intracranial hematoma in right parietal region and extension of blood into right lateral ventricle causing mass effect and midline shift to left. Intracerebral hemorrhage resulting from ruptured aneurysm or arteriovenous malformation bleed was suspected. Patient underwent right parietal craniotomy with evacuation of hematoma and specimen was sent for histopathological examination.

Histopathological report revealed the diagnosis of metastatic choriocarcinoma, which was confirmed by elevated serum beta

HCG levels of more than 2,25,000 mIU/ml. However, the patient did not have any evidence of the tumor elsewhere. Patient was given chemotherapy (EMA-CO regime) comprising etoposide, methotrexate, actinomycin-D cyclophosphamide and oncovin. After seven cycles of chemotherapy her beta hCG dropped to normal (< 4 mIU/ml).

Patient resumed her normal menstruation and was kept on combined oral contraceptive pills. She was lost to follow-up in between and stopped taking OCP on her own. Then after few months she came with history of amenorrhea of 6 weeks. Diagnosis of pregnancy was made with positive urine pregnancy test and TVS. Patient came for regular antenatal check-up and at 37 to 38 weeks she delivered a healthy baby by normal delivery.

## DISCUSSION

Choriocarcinoma is a malignant gestational tumor of syncytiotrophoblasts and cytotrophoblasts which can develop after term pregnancies, molar pregnancies, abortions or ectopic pregnancies. It metastasizes to the lung, vagina, pelvis, liver and less frequently to the brain.<sup>1</sup> In a study of patients having brain metastasis, in cases of gestational choriocarcinoma, pulmonary metastasis was seen in 27 out of 28 cases,<sup>2</sup> but there was no evidence of pulmonary metastasis in our case. This emphasizes that a diagnosis of metastatic cerebral choriocarcinoma should be considered even if pulmonary examination is negative. In our case, spontaneous intracerebral

hemorrhage was the initial presentation without any evidence of primary tumor elsewhere and the correct diagnosis was established only after histological examination. A similar case of an unsuspected choriocarcinoma has also been reported by Suresh TN et al.<sup>3</sup> Our case highlights the value of histopathological examination of surgically excised blood clot in determining the etiology of intracerebral hemorrhages.

Treatment with multi-agent chemotherapy with additional surgery or radiation is required for management of high-risk metastatic GTN. Bower and associates<sup>4</sup> included 272 patients with high-risk GTN treated with EMA-CO. Complete remission was recorded in 213 (78%) while 33 patients who failed to respond to EMA-CO were salvaged with additional therapies resulting in overall 5-year survival of 86.2%. Our patient showed a good response with postsurgical chemotherapy as indicated by rapidly dropping levels of serum beta hCG.

After effective treatment of malignant GTN many patients have subsequently had normal gestations without difficulty and in many patients pregnancy advanced up to term. Woolas et al<sup>5</sup> updated the outcome data of post-treatment reproductive intent and outcome from 1121 GTN survivors. Of 728 women, 607 reported at least one live birth, 73 conceived but had not registered a live birth, and 48 did not conceive. Our patient came 6 months after delivery for follow-up. She had resumed her normal menstruation and both mother and baby were normal.

## CONCLUSION

Spontaneous intracerebral hemorrhage in young women of reproductive age group should raise the suspicion of metastatic choriocarcinoma. Measurement of serum beta hCG and treatment with multi-agent chemotherapy help in implementing effective management of these patients. Chemotherapy protocols in the treatment of malignant GTN have minimal impact on the subsequent ability to reproduce.

## REFERENCES

1. Huang CY, Chen CA, Hsieh CY, Cheng WF. Intra-cerebral hemorrhage as initial presentation of gestational choriocarcinoma. *Int J Gynecol Cancer* Sept-Oct 2007;17(5):1166-71(S).
2. Iszhizuka T, Tomoda Y, Hesaki S, et al. Intracranial metastasis of choriocarcinoma: A clinicopathological study. *Cancer* 1983; 52:1896-903(S).
3. Suresh TN, Santosh V, Shastry Kolluri VR, Jayakumar PN, Yasha TC, Mahadevan A, Shankar SK. Intracranial hemorrhage resulting from unsuspected choriocarcinoma. *Metastasis Neurol India* 2001;49:231-36(S).
4. Bower M, Newlands ES, Hoden L, et al. EMA – CO for high risk gestational trophoblastic tumors: Results from a cohort of 272 patients. *J Clin Oncol* 1997 15:3168 *J Clin Oncol* 1997;15:2636.
5. Woolas RP, Bower M, Newlands ES, et al. Influence of chemotherapy for gestational trophoblastic disease on subsequent pregnancy outcome. *Br J Obstet Gynaecol* 1998; 105:1032.