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Term Pregnancy Following Chemotherapy for Choriocarcinoma

Rathore Samta Bali[1], Rathore Siddharth Singh[2]
[1]Assistant Professor Department of Obstetrics and Gynaecology, Mahatma Gandhi Medical College and Hospital Sitapura, Jaipur, Rajasthan, India
[2]Assistant Professor Department of Paediatric Surgery, Mahatma Gandhi Medical College and Hospital Sitapura, Jaipur, Rajasthan, India

***Corresponding Author:**
Name: Dr. Samta Bali Rathore
Email: dr.sbrathore@yahoo.com

Abstract: A 25 year old female was referred to us from a Choriocarcinoma. Patient conceived within one year of chemotherapy for choriocarcinoma and delivered by cesarean section.
Keywords: choriocarcinoma, chemotherapy, postchoriocarcinoma pregnancy

INTRODUCTION

Choriocarcinoma is a quick-growing form of cancer that occurs in a woman's uterus. The abnormal cells start in the tissue that would normally become the placenta, the organ that develops during pregnancy to feed the fetus.

Choriocarcinoma is a type of gestational trophoblastic disease.

The cancer may occur after a normal pregnancy. However, it most often occurs with a complete hydatidiform mole. The abnormal tissue from the mole can continue to grow even after it is removed, and can turn into cancer. About half of all women with a choriocarcinoma had a hydatidiform mole, or molar pregnancy.

Choriocarcinomas may also occur after an early pregnancy that doesn't continue (miscarriage), ectopic pregnancy, or genital tumor.

The majority of metastasis affect lungs (80 %), vagina (30 %), ovaries (20 %), liver (10 %), brain(10 %), ureter and bowel (5 %) each [1].

CASE REPORT

A 25 year old female was referred to us from a CHC. She had a history of evacuation of a vesicular mole at a private hospital on 25th December 2004, where she was also transfused two units of blood. Check curettage was also done at the same hospital on 20th January 2005.

She had reported to the community health centre with the complaints of profuse bleeding per vaginum one month after the evacuation of vesicular mole. Dilation and Curettage was done again on 27th January 2005 at the CHC and products were sent for histopathological examination. The report showed presence of choriocarcinoma, so she was referred to R N T Medical College, Udaipur.

The patient was admitted to Panna Dhai Zanana Hospital, R N T Medical College on 15th February 2005 where she was transfused three units of blood to improve her general condition. She was then referred to the radiotherapy department of the same institute.

Her baseline complete blood count and liver function tests were within normal limits. The serum β-hCG levels were as follows –
23/02/05: 90,020mIU/ml
02/03/05: 78,454mIU/ml
29/03/05: 2,748mIU/ml

The first course of chemotherapy was given from 13/04/05 to 16/04/05. Injection Methotrexate was given 100 mg iv and 300 mg by iv infusion on day 1. Injection Sanifolin 25 mg im BD was given on day 2 and day 3. Injection Actinomycin-D 500 µgm was given on day 1 and day 3. Injection Etoposide 150 mg was given on day 1 and day 3.

Serum β- hCG on 30/05/05 was 9.14 mIU/ml. Second course of chemotherapy was started on 06/05/05. Six such courses of chemotherapy were given, the last one starting on 13/08/05. Serum β- hCG on 15/09/05 was 1.2 mIU/ml. On 16/11/05 it was 1.2mIU/ml. On 28/01/06 Serum β- hCG was measured to be 84,200mIU/ml and USG showed early live intrauterine pregnancy of gestational age 8.6 weeks.

The pregnancy was continued till term as the patient was not willing for termination. The pregnancy

was followed with periodic USG and Serum β- hCG levels.

She was admitted to the hospital on 29/08/06 with complaints of labor pains. She delivered a male child of 3.2 kg on 02/09/06 at 3.15 pm by emergency cesarean section under spinal anesthesia for premature rupture of membranes with non progress of labor. The post – operative period was uneventful, stitches were removed on day five and the patient discharged on the sixth post – operative day.

DISCUSSION

If the patient had chemotherapy as part of her treatment, she will need to wait a year after finishing her chemotherapy before she try and get pregnant again.

If she becames pregnant earlier she would have hCG in her blood and urine tests. This would make it difficult to monitor her GTT, and know for sure that her tumour is completely gone. The risk of the tumour coming back is highest in the first few months.

It's important to know that having a GTT does not increase her risk of having a baby with abnormalities. Her risk of this happening is no greater than it would be if she hadn't had a GTT. Even after chemotherapy treatment, the chance of having a healthy baby is the same as for any other woman of the same age.

Another thing to be reassured about is that the risk of having another molar pregnancy is low. Only 1 out of 100 women (1%) have another molar pregnancy. There is no increase in the risk of complications in further pregnancies.

Little literature exists on the safety of early pregnancy following chemotherapy. Though, we still advise avoiding pregnancy within 12 months of completing chemotherapy, those that do conceive can be reassured of a likely favorable outcome. The patients who are treated successfully with chemotherapy should be reassured that they can anticipate a normal reproductive outcome in later conceptions. Treatment of gestational trophoblastic disease with chemotherapy is compatible with the preservation of fertility and is not associated with any increase in congenital fetal malformations.

The estimated incidence of choriocarcinoma is 1:60,000 to 1:70,000 pregnancies and still higher in Asians. The prognosis is fair, except for some high risk patients. It is preceded by vesicular mole (50 %), spontaneous abortion (20 %), term pregnancies (20–30 %) and ectopic pregnancy (2 %) [1]. Methotrexate is used as a first line treatment of gestational choriocarcinoma. Berkowitz *et al.* used Methotrexate and folinic acid as primary therapy in 185 patients with gestational trophoblastic disease between 1974 and 1984. It induced complete remission in 147 (90.2 %). Sustained remission was achieved in 132 (81.5 %) patients following only one course of chemotherapy [2]. Combined chemotherapy is commonly used in gynecologic cancer in order to overcome resistance by tumor cells by choosing drugs with different mechanisms of action and also to reduce overlapping toxicity. MAC 3 regime is still preferred as first line combined chemotherapy in some developing countries. MAC was used as primary therapy in 100 cases and as second line chemotherapy in 6 cases in a study of 142 patients from 1977 to 2006 in Hungary [3]. Of the 100 cases, 95 achieved complete remission. Results of this study support that patients with high risk metastatic GTN should primarily be treated with combination chemotherapy (MAC) [3].

Proper counseling regarding meticulous follow up is an essential part of managing choriocarcinoma. In a study conducted by Leslie A. Garrett *et al.* reported that after successful chemotherapy for GTN, the incidence of still birth was reported to be 1.4 % in later pregnancies [5]. Results of this study conclude that the subsequent reproductive outcome with complete mole and persistent GTN were same as in the general population.

Patients with molar pregnancies and GTN should be reassured that they can in general expect a normal future reproductive outcome [5, 6].

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