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CASE REPORT

Successful Pregnancy After Chemotherapy for Choriocarcinoma

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Introduction

Choriocarcinoma is an aggressive malignant disease that originates in the trophoblastic cells of the placenta, characterized by early hematogenous spread to the lungs. It belongs to the far spectrum of gestational trophoblastic disease (GTD), a subset of germ cell tumor. It is a hypervascular tumor composed of sheets of malignant cytotrophoblast and syncytiotrophoblast metastasizing hematogenously and producing a dramatic rise in β hCG levels. Rarely it occurs in primary locations other than the placenta. The majority of metastasis affect lungs (80 %), vagina (30 %), ovaries (20 %), liver (10 %), brain(10 %), ureter and bowel (5 %) each [1].

Case Report

A 26 years female P_1,L_1,A_2 weighing 40 kg, presented with per vaginal bleeding since 20 days with h/o D&C done for missed abortion 1 month back. She had first full term normal delivery 7 years ago and 2nd first trimester spontaneous abortion 5 years ago. Third pregnancy was diagnosed as missed abortion for which D&C was done. She was pale with pulse rate 110/min and B.P. was 90/60 mm of Hg. On abdominal examination, uterus was 14–16 weeks, size and tender. Per speculum examination revealed bleeding through os++ Per vaginal examination revealed uterus to be 14–16 weeks, soft with bilateral adnexal cysts of approximately 4 × 4 cm size. On investigations her Hb was 7 gm% with CBC-9,000/ccm, blood group B+ve and hepatic, renal, thyroid function tests normal. Ultrasonography report showed uterus 11.3 × 3.9 × 10 cm in size with vesicles and bilateral theca lutein cysts+. Her β hCG levels were 4,10,000 mIU/ml. Clinically she was diagnosed as GTD. Evacuation of the molar pregnancy was done under antibiotic cover along with oxytocin drip. Two pints of blood transfusion were given. Histopathology report revealed atypical trophoblastic hyperplasia and anaplasia confirming the diagnosis of choriocarcinoma. Patient was categorized stage 3 by FIGO staging and based on WHO prognostic scoring system, score was 6. Patient was started on single drug chemotherapy—MTX-FA regime. Methotrexate 50 mg was administered by I.M. route on day 1, 3, 5 and 7 .Folinic acid was given 0.4 mg on day 2, 4.6 and 8. Two cycles of MTX were administered but β hCG levels for consecutive 3 weeks remained unaltered. X-ray chest revealed two nodular cannon ball bike lesions favoring metastases. The brain, pelvis and abdomen were negative for metastatic lesions. Therefore patient was started MAC-3 regime as Inj.Methotrexate—50 mg I.M. on day 1, 3, 5 and 7. Inj. Folinic Acid—0.4 mg I.M. on day 2, 4, 6 and 8 (24 h post MTX). Inj. Actinomycin-D—0.5 gm I.V. (12 μg/kg) day 1–5. Inj. Cyclophosphamide—140 mg I.V. day 1–5. This regime was given for 1 week and after a gap of 3 weeks next cycle was started. At the beginning of each cycle, clinical examination as well as Hb%, CBC, LFT, RFT X-ray chest and USG

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pelvis were done. Patient responded very well. At the end of 4th cycle β hCG dropped to 504 μ/ml. Dramatically at the end of 6th cycle serum β hCG dropped to undetectable levels. Follow up chest X-ray was normal. Two more cycles of MAC 3 were administered to prevent relapse. Pt. was advised weekly follow up for 3 weeks and then monthly for 6 months. Consecutive β hCG levels were nil. So she was advised two monthly follow up for next 6 months and 6 monthly follow up for 2nd year. Barrier contraception was advised for 2 years. After 2 years of post chemotherapy β hCG were undetectable and with no evidence of metastases complete remission achieved. So contraception was stopped. She conceived within 3 years of contraception free period. Congenital anomaly scan at 16 weeks of pregnancy was normal. She delivered at term in her village.

Discussion

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]. About 50 years ago, women with choriocarcinoma had 95 % mortality rate, today with the advent of effective chemotherapy and the development of a reliable tumor marker "β hCG" a cure rate of 90–95 % is observed [1]. Methotrexate is an active drug in the first line treatment of gestational choriocarcinoma. Methotrexate and folinic acid was administered as primary therapy in 185 patients with gestational trophoblastic disease between 1974 and 1984, in a study conducted by Berkowitz et al. MTX–FA regime induced complete remission in 147 (90.2 %). Sustained remission was achieved in 132 (81.5 %) patients following only one course of chemotherapy [2]. As our patient turned out to be resistant to single agent (MTX) chemotherapy we had to switch over to combination chemotherapy. Combined chemotherapy is commonly used in gynecologic cancer so as 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 as a primary therapy was used in 100 cases and as second line chemotherapy in six 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].

This case is presented to stress the importance of a comparatively affordable and three drug chemotherapy regime instead of five drug EMACO regime thereby reducing not only the cost but also lessening toxicity of drugs [4]. Proper counseling regarding meticulous follow up is an essential part of managing choriocarcinoma. After successful chemotherapy for GTN, the incidence of stillbirth was reported to be 1.4 % in later pregnancies in a study conducted by Leslie A. Garrett et al. [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]. In our patient MAC 3 regime not only proved a successful remedy but she could conceive within 3 years of contraception free period with a successful outcome.

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