

# Primary vulvovaginal choriocarcinoma patient who underwent autologous hematopoietic stem cell transplantation: A case report of unusual presentation

Ramazan Esen<sup>1\*</sup>, Nurlan Mammadzada<sup>2</sup>, Birol Yildiz<sup>3</sup>, Nuri Karadurmus<sup>3</sup>

<sup>1</sup>Department Of Medical Oncology, University Of Health Sciences, Diskapi Education And Research Hospital, Ankara, Turkey

<sup>2</sup>Department Of Internal Medicine, University Of Health Sciences, Gulhane School Of Medicine, Ankara, Turkey

<sup>3</sup>Department of Medical Oncology, University of Health Sciences, Gulhane School of Medicine, Ankara, Turkey

## ABSTRACT

Ovarian germ cell tumors (GCT) are derived from primordial germ cells of the ovary. Choriocarcinomas are more commonly of placental than ovarian origin in a woman. Vaginal choriocarcinoma is seen very rare in the literature. If the germ cell tumors are relapsed or refractory to the salvage chemotherapy, autologous hematopoietic stem cell transplantation (AH SCT) can be used for the treatment. Our aim is to present a rare vaginal choriocarcinoma patient who underwent AH SCT due to the relapsed disease.

A 46-year-old woman who had two vaginal deliveries 18 years ago, presented with a vaginal mass. The diagnosis was made as choriocarcinoma after abscess drainage. Due to the elevated levels of  $\beta$ -HCG, she had undergone chemotherapy. After the four lines chemotherapy serum tumor markers remained high. Because of that reason, AH SCT was performed and after the transplantation, the  $\beta$ -HCG level has decreased. The patient was observed with a very good partial response.

According to current literature, AH SCT is a reasonable treatment option for relapsed or resistant cases. In conclusion, our case is the first and unique who has undergone AH SCT. AH SCT is an effective and tolerable treatment for ectopic relapsed and refractory choriocarcinoma cases.

**Key Words:** Choriocarcinoma, stem cell, transplantation

## Introduction

Choriocarcinoma is a gestational trophoblastic tumor and also a germ cell tumor that mainly affects women of childbearing age and rarely occurs in postmenopausal women especially following a long latent period from previous pregnancies. Since choriocarcinoma is absolutely sensitive to chemotherapy, the cure rate even for metastatic choriocarcinoma is around 90-95%. At present, treatment with single-agent methotrexate is recommended for low-risk disease, while intense combination chemotherapy agents including EMA-CO (etoposide, methotrexate, actinomycin D, cyclophosphamide, and vincristine) are recommended for the intermediate or high-risk disease. If the germ cell tumors are relapsed or refractory to the salvage chemotherapy, autologous hematopoietic stem cell

transplantation (AH SCT) can be used for the treatment like lymphoproliferative diseases and sarcomas (1,2).

Though there are several cases of uterine choriocarcinoma metastatic to vulva, vagina or tuba (3-5), according to our knowledge, there are few cases of primary extrauterine vaginal choriocarcinoma and primary vulvar choriocarcinoma that have been reported in the literature (6,7).

Additionally, it is the first and unique in the literature for undergoing AH SCT. Our aim is to present vaginal choriocarcinoma patient who underwent AH SCT due to the relapsed disease.

## Case Report

A 45-year-old multiparous woman was referred to the department of gynecology at local hospital, Turkey in

\*Corresponding Author: Ramazan Esen, Department of Oncology, Diskapi Education and Research Hospital, Ankara, Turkey, 06018  
E-mail: esenramazan0@gmail.com Tel: +9 (0312) 304 11 18, Fax: +9(0312) 304 43 81

2015. Her symptom was non-bloody vaginal discharge. Her last pregnancy was 18 years ago which ended up with normal delivery. She had no history of molar pregnancy or abortion. Clinical examination revealed a bloody mass in posterior wall of vagina at another gynecology polyclinics. Biopsy was performed due to suspicion of vaginal mass. Histological features and immunohistochemistry were consistent with choriocarcinoma. Serum  $\beta$ -hCG level was 26.000 mIU/ml. There was no lesion in chest and abdomen computerised tomography. The patient received 8 cycles of EMA-CO regimen as first-line treatment due to resistant BHCG increase. Target BHCG levels could be achieved after these treatment agents. BHCG levels again increased during follow-up. At the pelvic examination vaginal mass was detected again and excisional biopsy was performed. The biopsy revealed malign trophoblastic neoplasia. The patient received 4 cycles of carboplatin and paclitaxel due to high levels of BHCG at another oncology clinic. BHCG levels again increased during follow-up. No mass was detected in thorax abdominal CT. The patient had received BEP (bleomycin, etoposide, cisplatin) as third-line treatment due to the BHCG increase for three cycles and etoposide, cisplatin (EP) for three cycles. The BHCG levels were not still in the normal range. As 4th line chemotherapy regimen, the patient underwent chemotherapy regimen as paclitaxel, ifosfamide, and cisplatin (TIP) combination for two cycles. After the treatment BHCG reduced. AHSCT has been considered due to relapsed and refractory disease. High dose chemotherapy (HDCT) regimen for AHSCT consisted of 700 mg/m<sup>2</sup> of carboplatin in combination with 750 mg/m<sup>2</sup> etoposide on days 1-3 (8). The patient underwent AHSCT in February 2018. One month later after the transplantation BHCG level reduced to normal values.

## Discussion

Choriocarcinoma is generally observed in women at the reproductive age within a year of an antecedent pregnancy, but can also be observed in postmenopausal women in rare cases, following a long latent period from previous pregnancies.

According to the literature choriocarcinoma with a vaginal presentation is a very uncommon disease (4-7). We think that the possible cause of vaginal choriocarcinoma is the placental implant during vaginal delivery.

Vulvovaginal metastasis should be considered as a poor prognostic factor according to the International Germ Cell Consensus Classification (IGCCC). In the literature in this context combination chemotherapy is

recommended as the first line chemotherapy choice (9,10).

There's also a bunch of previous studies that have suggested an effective therapy for high-risk gestational trophoblastic tumors. The EMA-CO regimen is one of them (11). Therefore, based upon histology, serum tumor markers, and immunochemistry analysis, first-line treatment was initiated by EMA-CO by another oncology clinic. At first, also a complete response had been achieved.

In the literature, the BEP protocol is also an optimal treatment (3). The treatment option for third-line treatment as BEP protocol was performed due to high tumor marker. The patient had a complete response at first. But the relapse occurred after a while. After the relapse, TIP treatment has been considered for the salvage treatment as third-line chemotherapy as it has been suggested in the literature for germ cell tumors.

Our patient did not respond to multiple lines chemotherapy regimens and eventually, we considered AHSCT for salvage therapy. According to the literature, we couldn't find any vulvovaginal choriocarcinoma who underwent AHSCT. After the AHSCT a complete response has been achieved.

In conclusion, our case is the first and unique who has undergone AHSCT. AHSCT is an effective and tolerable treatment for ectopic relapsed and refractory choriocarcinoma cases.

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