# CASE REPORTS

# A Rare Case of Cutaneous Metastasis of Postpartum Choriocarcinoma

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**Gestational trophoblastic disease has been reported to be responsive to chemotherapy, with a 90% cure rate. Several factors place patients at high risk of experiencing treatment failure with single agent chemotherapy. Choriocarcinoma following term pregnancy is very rare and associated with a poor prognosis and a mortality rate of 33-40%. We present a rare case of cutaneous metastasis of choriocarcinoma to the left third digit.**

*Key words: Choriocarcinoma, Post partum, Cutaneous metastasis*

Gestational trophoblastic disease has been reported to be responsive to chemotherapy, with a 90% cure rate. Several factors place patients at high risk of experiencing treatment failure with single agent chemotherapy (1): long duration of disease (>4 months since last pregnancy), high pretreatment β-HCG levels (>40,000), brain or liver metastasis, antecedent term pregnancy and prior chemotherapy. Choriocarcinoma following term pregnancy is very rare (1/50,000) and is associated with a poor prognosis and a mortality rate of 33-40% (2). Obtaining a histological diagnosis is not always possible because biopsy of metastatic choriocarcinoma may lead to torrential hemorrhage. Initial treatment is based on symptoms, clinical findings and elevated b-HCG levels (2). We present a rare case of cutaneous metastasis of choriocarcinoma to the left third digit. Only three other cases of cutaneous metastasis are reported in the literature (3-5).

## Case Report

A 23 year-old $G_3P_{2001}$ female with history of a spontaneous vaginal delivery in 2001 at term and a cesarean section in 9/2006 due to intra uterine fetal demise and severe preeclampsia at term. She presented 2 months after cesarean section with persistent vaginal bleeding, but no abnormal pathology was found. No other pertinent medical history. No quantitative βHCG was done at that moment. Patient then presented with vaginal bleeding with $11^{2/7}$ weeks of amenorrhea and positive serum βHCG. Exam showed dilated cervix without bleeding and empty uterus on endovaginal sonogram. A quantitative pregnancy test was done and showed βHCG>200,000. The patient was sent home with order of serial quantitative β-HCG, but patient did not return. The patient presented several days later with shortness of breath, chest pain and palpitations to a community health center. Chest X Ray was done and the patient was transferred to our institution. CXR showed 3 distinct round lesions, enlarged heart and possible right pleural effusion. In view of these findings and above history, a presumptive diagnosis of choriocarcinoma with metastatic lung disease was made and the patient was admitted for appropriate workup. Whole body CT scan was ordered. Patient was oriented about findings. Physical exam presented a nodular lesion in scalp and ungal lesion in the left third digit. Patient was clear to auscultation and without evident neurological deficits. No metastatic disease or gross lymphadenopathy was seen on neck or abdomino-pelvic CT scan. On thorax CT scan, multiple gross bilateral pulmonary and mediastinal metastatic disease were seen, with large right infrahilar metastatic mass displacing the right hemidiaphragm inferiorly. The brain CT scan showed a right posterior superior convexity enhancing lesion compatible with metastatic lesion with suggestive hemorrhagic component. Patient was started in EMA-CO therapy (Dactinomycin, Ectoposide, Methrotrexate, Cyclophosphamide and Vincristine). After completing one cycle of chemotherapy, βHCG level was 91,000. A series of imaging studies were repeated to evaluate metastatic lesions and no significant change was observed. A biopsy was taken from the ungal lesion. The microscopic examination revealed large cells with pleomorphic nuclei, some of them arranged in nests. The pathology reported an undifferentiated neoplasm, most probably metastatic to skin. Patient had the second and third EMA-CO chemotherapy cycle in-hospital. The lesion of the finger and the scalp resolved completely after three courses of chemotherapy, leaving only a mark on the skin, and no further management was

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needed for the cutaneous metastasis. Chemotherapy was well tolerated and the third cycle was finished with βHCG levels of 1,877. She was discharged home on 3/30/07 for follow up at outpatient clinics due to stable condition and improvement. Patient received a fourth cycle as outpatient on 4/07. Patient was contacted early July and referred two more chemotherapy cycles were on schedule, but recently had another episode of convulsion. Patient was called several times for follow up at Gyn-Onco clinics, but she never could attend, and died in late July 2007.

## Discussion

Although choriocarcinoma is very uncommon, it is potentially treatable with good response to chemotherapy and an early diagnosis is extremely important. The time interval or delay between onset of symptoms and diagnosis with subsequent referral for treatment must be reduced. The morbidity is greatly increased in a patient with high risk choriocarcinoma (2) (score >7). When choriocarcinoma is associated with IUFD (intrauterine fetal demise), the tumor is often found in the fetus, but is unclear if the tumor leads to the demise or the dissemination occurs after fetal death (1). Our patient had an IUFD and severe preeclampsia, reason for which a cesarean section was done. No such pathological evidence was reported in our patient. Markedly elevated pre-treatment levels of bHCG, prolonged disease duration and brain or liver metastasis are very important for identifying patients with poor prognosis (2). When the prognostic score is higher than 7, the patient is categorized as high risk and requires intensive combination chemotherapy to achieve remission (6). Our patient had levels of βHCG>200,000, term pregnancy was more than 3 months before and at the moment of diagnosis she already had brain and lung metastasis. Definitely our patient qualified as a high risk patient (score of 14) and the best treatment was multi-agent chemotherapy. Our patient was started on the EMA-CO regimen (etoposide, methotrexate, dactinomycin, cyclophosphamide and vincristine), but there are other multi-agent combinations that have been used with success. Some examples are CEC (Cisplatin, Etoposide and Cyclophosphamide) and MAE (Methotrexate, Dactinomycin and Etoposide) (7). The lesion of the third digit was identified before chemotherapy was started and extraordinarily responded to chemotherapy, with total resolution. Different from the case of finger metastasis reported in literature, where the lesion appeared 18 months after chemotherapy. A clone resistant to chemotherapy was suspected and finger amputation was decided. This patient received multi-agent chemotherapy, but died 1 year after cutaneous metastasis appeared. Our patient also received brain irradiation for brain metastasis. Brain irradiation combined with systemic chemotherapy is successful in controlling brain metastasis, with cure rates of up to 75% (8). Even though cutaneous metastasis resolved in our patient, brain metastasis did not and she died 7 months after diagnosis. Cutaneous metastases are very rare and associated to poor prognosis given that is a sign of disseminated disease. The most common site of metastasis are the lungs followed by brain and liver metastasis. The time interval between onset of symptoms, diagnosis and subsequent referral for chemotherapy must be reduced, given a considerable increase in morbidity with delayed treatment. Most treatment failures are attributed to the presence of extensive choriocarcinoma at diagnosis and lack of appropriate initial treatment. In conclusion, although this condition is extremely uncommon, it is potentially treatable but an early diagnosis is crucial (7).

## Resumen

Se ha informado que la enfermedad trofoblástica gestacional responde bien a la quimioterapia, con un índice de curación de un 90%. Varios factores colocan al paciente en un alto riesgo de fracaso del tratamiento con un solo agente quimoterapéutico. El coriocarcinoma luego de un embarazo a término es raro y está asociado a un pobre pronóstico, con una mortalidad de un 33-40%. En este manuscrito, presentamos un caso raro de metástasis cutánea de un coriocarcinoma posparto al tercer dedo de la mano izquierda. Este es el caso de una fémina de 23 años con muerte fetal intrauterina debido a preeclampsia severa a término. Ésta se presenta 2 meses después con sangrado vaginal persistente y una prueba de embarazo cuantitativa >200,000. Luego, la paciente desarrolla falta de aire, dolor de pecho y palpitaciones. Una placa de pecho mostró 3 lesiones redondas, cardiomegalia y efusión pleural derecha. Se hizo un diagnóstico probable de coriocarcinoma metastásico al pulmón. El examen físico reveló una lesión nodular en el cuero cabelludo y una lesión cutánea en el tercer dedo izquierdo. Un CT de pecho mostró múltiples lesiones bilaterales pulmonares y en el mediastino. El CT de cabeza mostró una lesión metastásica con un componente hemorrágico. La paciente se comenzó en una quimioterapia con múltiples agentes (EMA-CO). Luego de completado un ciclo, el nivel del βHCG bajo a 91,000. Se tomó una biopsia de la lesión digital y ésta mostró una neoplasia no diferenciada, lo que sugirió metástasis a la piel. La paciente recibió el segundo y tercer ciclo de quimioterapia en el hospital. Las lesiones del dedo y el cuero cabelludo desaparecieron casi por completo luego de los tres ciclos y el nivel del

βHCG bajo a 1,877. La paciente fue dada de alta para recibir seguimiento en las clínicas, donde se le administró un cuarto ciclo de quimioterapia. Nunca llegó a su cita de seguimiento en la clínica de gine-onco. La paciente murió 7 meses después del diagnóstico.

El coriocarcinoma es bien raro, pero potencialmente tratable con buena respuesta a la quimioterapia, por lo cual un diagnóstico temprano es importante. La morbilidad aumenta grandemente cuando es un coriocarcinoma de alto riesgo. Cuando la puntuación del pronóstico es mayor de 7, el paciente se categoriza como alto riesgo y requiere quimioterapia de combinación para llegar a una remisión. Nuestra paciente comenzó un tratamiento con EMA-CO. Las metástasis cutáneas son extremadamente raras y se asocian con un pobre pronóstico dado que es un signo de una enfermedad diseminada. La mayoría de los fracasos del tratamiento se atribuyen a la presencia de una enfermedad extensa al momento del diagnóstico o a la falta de un tratamiento adecuado inicialmente.

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