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Case Report

Cutaneous Metastasis of Gestational Trophoblastic Neoplasia on the Face

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ABSTRACT

Background: Choriocarcinoma is a malignant tumor of trophoblastic origin which is highly sensitive to chemotherapy and has a 95-98 % 5-year survival rate even after metastasis.

Objective: We report a rare site of cutaneous metastatic choriocarcinoma in a 30 years old lady who presented with multiple bleeding nodules on her face.

Case Report: The patient had a history of vaginal delivery one and a half year back and presented to the hospital with abnormal uterine bleeding for three months. The skin biopsy revealed a tumor showing dual cell population of cytotrophoblasts and syncytotrophoblasts with extensive hemorrhage and necrosis. Tumor cells were positive for immunohistochemical stains cytokeratin and beta Human Chorionic Gonadotrophin (β HCG) confirming the trophoblastic origin. Her β HCG level was 31,550mIU/ml. Metastatic Gestational Trophoblastic Neoplasia (GTN) occurs in 4 % of patients after evacuation of complete hydatidiform mole and very infrequently after other pregnancies. Lung (80%), vagina (30%), brain (20%) and liver (10%) are common sites of metastasis.

Conclusion: Cutaneous metastasis in GTN has been reported in only 13 other patients till 2015. Our report highlights the importance of histo-pathological input in determining site of primary malignancy. Overall cutaneous metastasis is a poor prognostic indicator for survival.

Keywords: Cutaneous Metastasis, Trophoblastic Neoplasia, Gestational Choriocarcinoma

Introduction

Choriocarcinoma is a Gestational Trophoblastic Neoplasia (GTN) arising from the trophoblastic cells and from the germ cells of ovary and testes. It is characterized by secretion of beta Human Chorionic Gonadotrophin Hormone (β HCG). Choriocarcinoma has an incidence of 9.2 per 40,000 normal pregnancies in South Asia and 1 per 40,000 pregnancies in Europe and North America.[1]Metastasis of Choriocarcinoma in the lung (60-95%), vagina (40-50%), brain (10-15%), kidney, spleen (less than 5%) are well described in the literature.[2,3] Skin is a rare site of metastasis; it is typically associated with late presentation and has poor prognosis.[4]We are reporting the case because of its rare and unusual presentation.

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Case Report

Thirty years old female presented to the dermatology outpatient department of our hospital with multiple bleeding nodules on the face. We received skin biopsy sample for her in the Department of Pathology. The histopathology revealed skin biopsy exhibiting a tumor in the dermis, associated with extensive hemorrhage and necrosis (Figure 1).

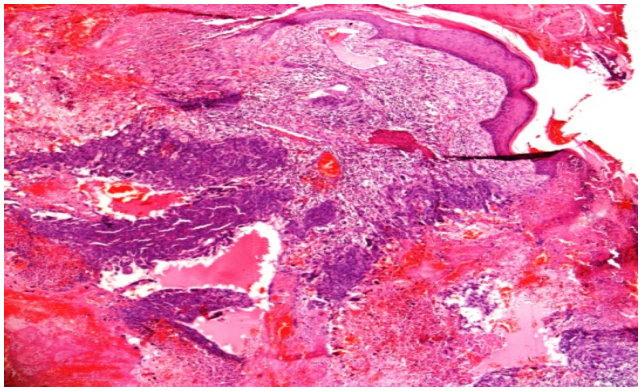

Figure 1. Skin biopsy showing a richly vascular tumor in the dermis with hemorrhage, necrosis and epidermal ulceration (H&E X 40)

On higher magnification, the tumor showed two cell populations; one comprising of mononuclear cells in lobules and the other were multinucleated giant cells (Figure 2).

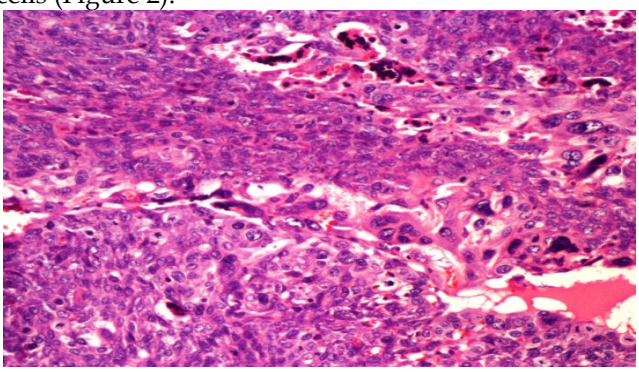

Figure 2. High power view showing two cell populations of mononuclear cytotrophoblasts and multinucleated syncytiotrophoblasts in the tumor. (H&E X 100)

A preliminary diagnosis of metastatic carcinoma was made, additional clinical information was requested, and the patient was advised to consult a gynecologist. The gynecologist provided the history of irregular and heavy bleeding per vagina for three months. Patient had delivered a live baby one year ago and did not have any history of abortion. Upon asking further, she was found to be gravida 3, para 3 with all normal vaginal deliveries resulting in live births. Her physical examination, including clinical, gynecological and speculum examination was normal except for bleeding per vagina. No co-morbidities were found. Her lab parameters were within normal limits except serum β HCG levels which was 31,550 mIU/ml. Ultrasound pelvis however, did not show any mass lesion in the uterus, cervix or adnexa. On immunohistochemistry, the tumor was strongly positive for Cytokeratin AE1/AE3 (Figure 3) and β HCG antigens (Figure 4).

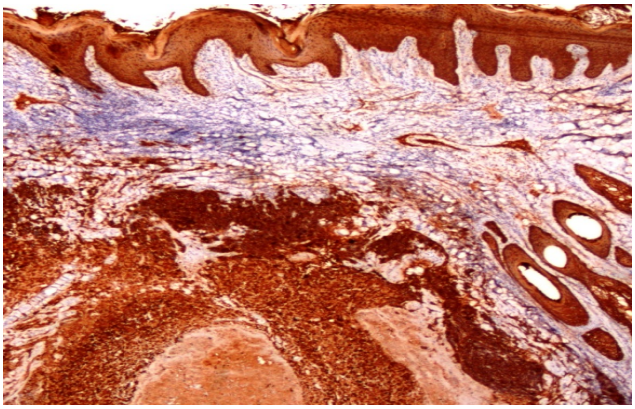

Figure 3. Tumor cells are positive for Cytokeratin AE1/AE3 Immunohistochemical antibody. (X 100)

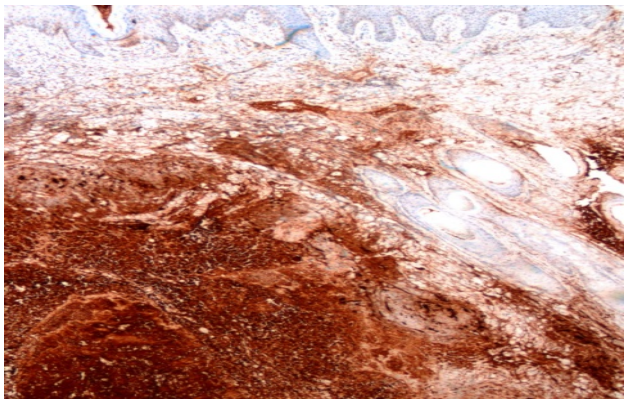

Figure 4. Tumor cells are positive for β HCG antibody (X100)

We confirmed the diagnosis of metastatic Choriocarcinoma. We were not provided with any additional clinical or radiological findings of the patient and unfortunately the patient was lost to follow up by our department that is why further diagnostic work up and treatment could not be reported.

Discussion

Choriocarcinoma belongs to the category of Gestational trophoblastic neoplasia (GTN) that arise from the trophoblastic cells of the placenta and includes: Partial mole, complete mole, invasive Hydatidiform mole, Placental site trophoblastic tumor and Intermediate trophoblastic tumor.[5] Choriocarcinoma is the most aggressive of these tumors and is usually associated with an antecedent history of hydatidiform mole (50%) but it may also follow an abortion (25%) or normal pregnancy (15%).[6] Choriocarcinoma being a very vascular tumor, has a significant potential for metastasis via hematogenous route; multiple organ metastasis is a common late complication of the tumor.[7] Microscopically Choriocarcinoma has very characteristic dual cell morphology, comprising of sheets of cytotrophoblasts and multinucleated syncytiotrophoblasts with extensive hemorrhage and necrosis.[6] β HCG serves as the tumor marker for GTN and is used for follow up, determining the response to treatment and relapse.[8] Choriocarcinoma is staged according to Federation of International Gynecology and Obstetrics (FIGO 2009) staging system and is scored according to Modified World Health Organization (WHO) prognostic scoring system.[9] GTN outside the uterus and metastatic to skin is FIGO stage IV. Stage III-IV is treated with multi-agent chemotherapy. Choriocarcinoma, primary and metastatic, responds well to chemotherapy with a cure

rate of 80- 90%; however, multiple organ metastasis portends a poor prognosis.[7]

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Authors' Contribution

RS: Study conception, study conduction, data analysis and manuscript writing

BHH: Study conduction and data analysis

RG: Study conception and study conduction