CASE STUDY

METASTATIC CHORIOCARCINOMA PRESENTING AS RENAL COLIC AND SKIN LESION – CASE REPORT

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ABSTRACT

Choriocarcinoma is a rare malignant disease that is usually associated with a gestational event. Kidney metastasis might be misdiagnosed as renal cell carcinoma or kidney abscess. To the best of our knowledge, only 13 cases of cutaneous metastasis of choriocarcinoma have been reported in the literature so far. We report a case of choriocarcinoma that manifested with multiple metastases to the lung, skin, kidney and brain.

Case report: We reported a case of a 37-year-old woman with a history of hydatiform mole, with symptoms of renal colic and abnormal findings on the skin. Chest X-ray revealed visible focal change 80 mm in diameter, located in the left lung area. The CT exposed in both kidneys multiple hypodense foci, 32 mm in size, suggesting multifocal abscesses with disruptions and perforation to paranephric area. Due to the presence of and temporary loss of vision in the right eye head CT was performed revealing metastatic changes in the brain. The diferential diagnosis between renal cancer, lung carcinoma and choriocarcinoma was achieved only after surgical removal skin lesion. This was the first time in our experience with choriocarcinoma. Immunohistochemically, the analysis was positive for beta hCG, cytokeratin AE1/AE, CK 8/18, CD10, EMA, alfa 1-inhibin and negative for protein 63, CD30 and CD117. Serum hCG level was 394590,0 mIU/mL.

Conclusions: Choriocarcinoma should be taken into consideration when associated symptoms and significantly elevated blood levels of β-hCG were identified.

KEY WORDS: gestational trophoblastic disease, skin metastasis, β-hCG, choriocarcinoma, complete molar pregnancy

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INTRODUCTION

Choriocarcinoma, a tumour of mostly gestational origin, may derive from testis, mediastinum, ovary and exceptionally, a placental site trophoblastic tumour [1]. It is considered to be the most malignant tumor type among all gestational trophoblastic diseases. It is characterized by the production of the beta human chorionic gonadotrophin hormone (β-hCG). Intrauterine and gestational choriocarcinoma is linked to hydatidiform mole, abortion, or ectopic pregnancy[2]. Non-gestational choriocarcinoma is remarkably rare, arising from pluripotent germ cells in the gonads or midline structures, such as the mediastinum. Irrespective of choriocarcinoma origin it can have highly varied and atypical clinical manifestation, mostly with an uncertain derivation[3]. Hematogenous spread develops in early stages of the disease. Metastases are most commonly recognized in the lungs (80%), vagina (30%), pelvis (20%), liver (10%), and brain (10%) [4]. Owing to their remarkable sensitivity to chemotherapy, the cure rates are almost 100% in the low-risk group and nearly 90% in the high-risk group with current chemotherapy regimens [5, 6]. But the prognosis of certain patients with choriocarcinoma is still poor [7]. In addition, brain metastasis was also regarded as a poor prognostic factor in previous reports [8]. Survival rates of patients with brain metastasis are significantly reduced as low as 35-60% [8, 9]. However, with the rarity of brain metastasis, there are still no guidelines on treatment strategies for these patients yet. To the best of our knowledge, only 13 cases of cutaneous metastasis of choriocarcinoma have been reported in the literature so far. Here, we report a case of choriocarcinoma that manifested with multiple metastases to the lung, skin, kidney and brain. We believe there has been no such similar case cited in the literature.

CASE REPORT

37 years-old female patient was referred to Urology Department on March 29, 2019 because of 2 weeks lasting pain in lumbar area, hematuria, hematoptysis and fever up to 38°C. During clinical examination a pigmentary lesion 30x15 mm in size was found on the skin of the right breast. In medical gynecological records the condition after miscarriage, hysterectomy, salpingectomy and left-side ovarectomy due to hydatidiform mole confirmed

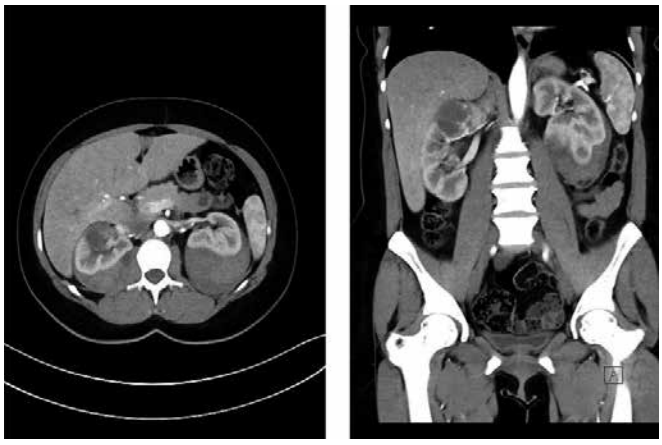

Fig. 1. Abdominal CT scan showing bilateral renal masses.

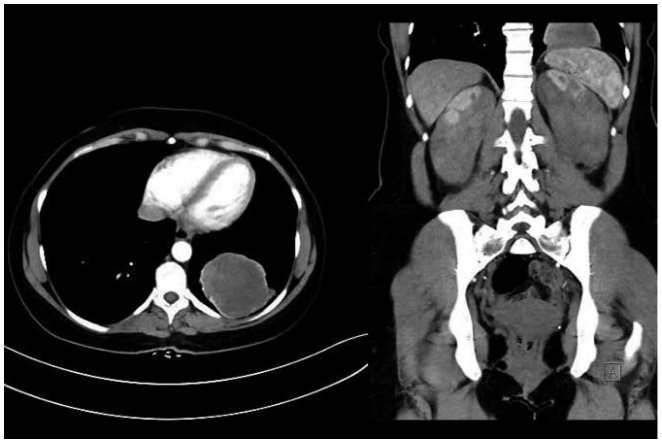

Fig. 2. Chest CT showing the metastasis of the trophoblastic disease.

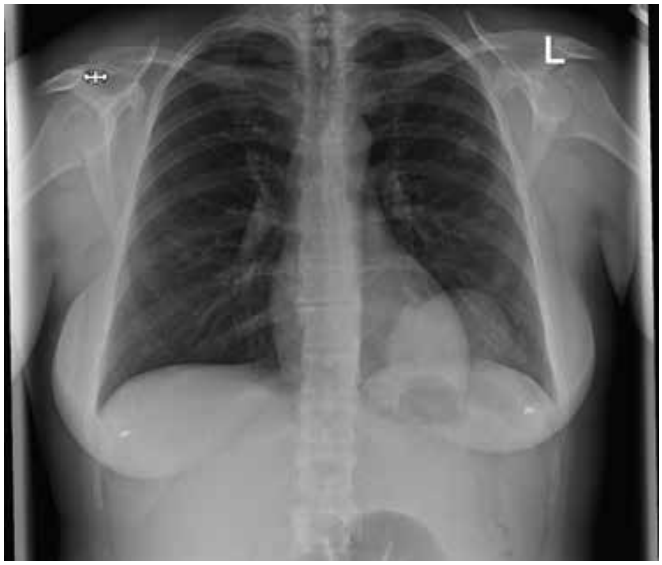

Fig. 3. Chest X-Ray showing lung metastases.

in histopathological test in 2015. Routine blood tests detected leukocytosis with a WBC of 12.71/ L, anemia with a hemoglobin of 8.9 g/dL, elevated C-reactive protein level (71.40 mg/dL) and leukocyturia. Blood and urine cultures were ordered. USG and abdominopelvic CT were performed. The imaging tests exposed in both kidneys multiple hypodense foci, 32 mm in size, suggesting multifocal abscesses with disruptions and perforation to paranephric area. The image might have suggested the presence of metastatic changes (Fig. 1).

In supraphrenic fragment of the left lung (on the verge of the scan) soft tissue hypodense focal change, contrast-enhancing and with tumour morphology, 71x63 mm in size, was detected (Fig. 2).

Chest X-ray revealed visible focal change 80 mm in diameter, located in the left lung area. Additionally, 3 focal changes with up to 13 mm diameter were found (Fig. 3). On the first day of hospitalization the patient observed melaena. It was accompanied by anemia 7,4 g/dl. The patient received the transfusion of 2 units packed red blood cells. Gastroscopy was performed and a bleeding Dieulafoy malformation in the stomach was found. It was dressed endoscopically, without taking a sample. On the second day of hospitalization the left kidney biopsy was performed and the sample was taken from the focal lesion. More samples have been taken from the lesion on the skin of the right breast (Fig. 4). Due to the presence of and temporary loss of vision in the right eye head CT was performed revealing metastatic changes in the brain (Fig. 5).

The histopathological sample taken from the left kidney was non-diagnostic. Histologic examination of the skin lesion revealed typical histologic features of choriocarcinoma (Fig. 6).

Immunohistochemically, the analysis was positive for beta hCG, cytokeratin AE1/AE, CK 8/18, CD10, EMA, alfa 1-inhibin and negative for protein 63, CD30 and CD117. Her serum hCG level was 394590,0 mIU/mL (upper normal limit: 10 mIU/mL). The final obtained diagnosis was choriocarcinoma skin metastasis (FIGO stage IV disease [5]).

The patient was referred to the oncology department, where combination chemotherapy was commenced. Immediate induction chemotherapy with EP (etoposide and cisplatin) with no use of bleomycin due to its pneumotoxicity was adminstered. It was changed to continuation and consolidation phase chemotherapy with EMA/CO (etoposide, methotrexate, actinomycin D, cyclophosphamide, vincristine). The lowest serum hCG level (813 mIU/ml) was reached after 24 weeks of treatment. Complete regression of the kidneys and skin lesions was achieved after one year of treatment. A CT scan revealed residual focal changes in the lungs and the brain. The treatment was complicated by post-steroid diabetes mellitus and sepsis. There was a gradual increase in the level of serum hCG (up to 102455,0 mIU/ml) and an increase in the number of metastatic lesions in the lungs 12 months after diagnosis. Due to the resistance to chemitherapy TP (paclitaxel/cisplatin) was included in the treatment and achieved a partial response. The seru hCG level was 38348,0 mIU/ml. As a result of disease progression and complications related to chemotherapy the patient died after 18 months of confirming the diagnosis.

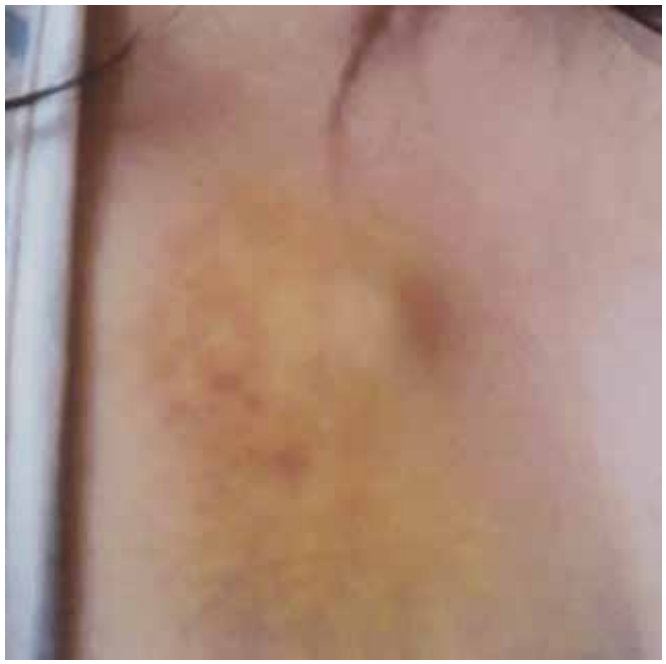

Fig. 4. Skin lesion of the right breast.

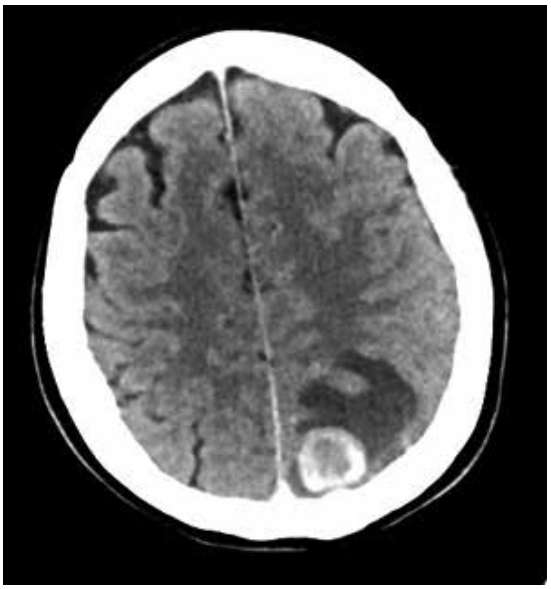

Fig. 5. Brain computed tomography imaging showing a contrast-enhancing 19 mm lesion in the right parietal lobe.

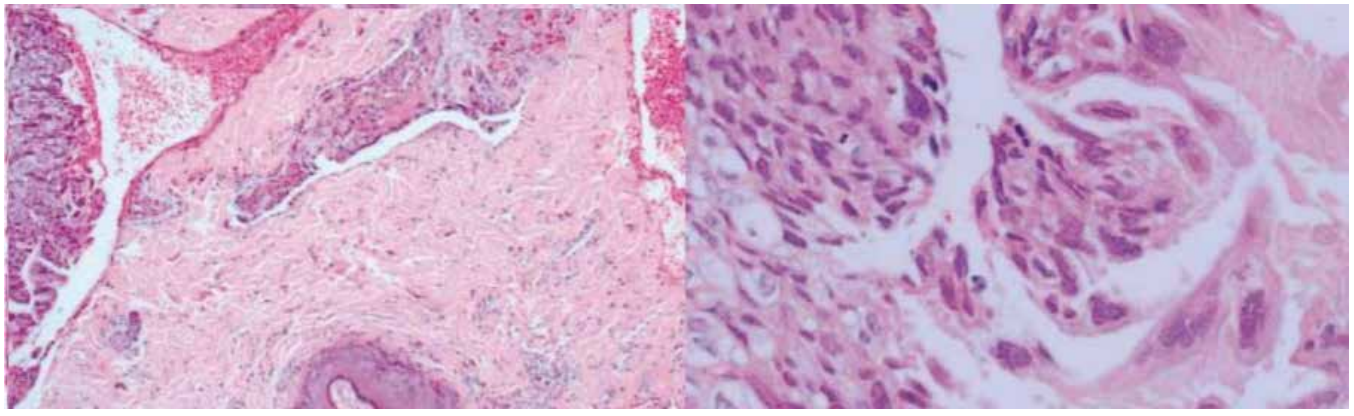

Fig. 6. Infiltrated tumour cells are composed of two populations of cells. One element is identified as cytotrophoblasts. The other cell population is identified as syncytiotrophoblasts (hematoxylin and eosin, ×200). HCG was positively stained in the cytoplasm of syncytiotrophoblasts but not the cytotrophoblasts (hCG stain, ×400).

DISCUSSION

Approximately 50% of choriocarcinoma cases are preceded by molar gestations, 25% by spontaneous abortions, 22.5% by normal pregnancy, and 2.5% by ectopic pregnancy[6]. Although hysterectomy after molar pregnancy often eliminates the risk of gestational trophoblastic diseases including choriocarcinoma, it is rarely reported that bilateral tubal ligation, hysterectomy, and menopause do not preclude the development of this tumour [7]. Choriocarcinoma progresses rapidly and metastasizes through haematogenous route primarily to the lungs, liver and brain. Metastasis can occur to virtually all the organs, however renal metastasis is rare with an incidence of 6.9% in a post mortem studies of patients with gestational choriocarcinoma [8]. Patients with choriocarcinoma may develop corresponding acute symptoms and be misdiagnosed due to multiple organ metastases. Tumor may infiltrate to pulmonary vessels, grow in the lung tissue and cause respiratory symptoms, such as cough and hemoptysis which are easily misdiagnosed as lung cancer or pulmonary tuberculosis. Diagnostic dilemma has been a recurrent problem in most of the reported cases and most cases have been misdiagnosed as renal colic or renal tumour until histologic or post mortem examination. Some researchers suggested a screening hCG to exclude the possibility of choriocarcinoma metastasis in young females with haematuria and renal mass suspected of renal carcinoma [8]. In our case no material was collected from gastric lesion interpreted as Dieulafoy malformation, but cases of primary gastric choriocarcinoma are described in the literature [9]. Compared to other organs, skin is an uncommon site of metastatic cancer in the body. However, as in our patient, cutaneous metastasis may be the first harbinger of a visceral malignancy of

unknown origin. Although choriocarcinoma responds relatively well to chemotherapy, cutaneous metastasis is an extremely uncommon presentation and a poor prognostic sign as it is associated with disseminated disease. Chama et al. reported another case of choriocarcinoma with metastasis to the chest wall, which responded well to 12 cycles of combination chemotherapy [10]. Our patient also responded well to this kind of treatment with almost complete skin lesions regression and a striking decrease of serum hCG. It is presumed that in our patient a molar pregnancy in the past was the cause of choriocarcinoma. Histological examination remains the gold standard for diagnosis. Therefore, this case report may help less experienced clinicians to consider the possible presence of choriocarcionoma metastases in patients with unexplained kidney and skin lesions.

CONCLUSIONS

Although choriocarcinoma is a rare tumour, it should be emphasized that it may occur even in patients after hysterectomy. Unusual skin lesions and unexplained colic pains in the kidney can be a latent form of malignancy. Early diagnosis is an essential element in the natural course of the disease since germinal tumours are very sensitive to chemotherapy. This case report emphasizes the importance of physical and histological examination of the skin metastatic lesions which may be crucial in establishing the correct diagnosis. Skin lesions, being easy accessible areas to obtain histological material, limit a patient's exposure to highly invasive surgical procedures.

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Conflict of interest:

The Authors declare no conflict of interest.

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