PRIMARY PULMONARY CHORIOCARCINOMA – CASE REPORT

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Literature has described only twenty-two cases of primary pulmonary choriocarcinoma. Unlike gestational choriocarcinoma which responds well to chemotherapy and has good prognosis, even in cases when detected later, pulmonary choriocarcinoma leads rapidly to fatal outcome. The reason is unknown. This paper presents a case of thirty-four-old young woman with clinical presentation of cough, expectoration, occasionally with hemoptisis, pleural pain, lack of breath and fever, with laboratory findings of pleural effusion on the left, which was treated as a case of tuberculosis for three months. Gynecological finding was regular. Progressive, rapid deterioration of general condition, degree of dispnea, hemoptisis episode led to respiratory failure before having appied the appropriate therapy. In cases of haemoptisis, one should think about this rare malignant entity and check the level of human chorionic gonadotropin in women. *Acta Medica Medianae 2010;49(4):43-44.*

Key words: *gestational trophoblastic disease, haemoptisis*

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Introduction

Choriocarcinoma, a representative neoplasm producing human chorionic gonadotropin (HCG), is an extremely malignant tumor originating from anaplastic trophoblastic tissue. It is usually intrauterine and arises most commonly from molar pregnancy, but may also follow a term or ectopic pregnancy and spontaneous abortions. Extragonadal, non-gestational choriocarcinoma is uncommon with a striking predominance in young women, as well as men, aged between 20 and 35 years (1,2). Primary pulmonary choriocarcinoma (PPC) is a specific entity and is one of the extrauterine non-gestational extragonadal choriocarcinomas which are mainly seen in association with midline structures such as mediastinum or retroperitoneum (3). These extragonadal choriocarcinomas are unusual in two ways: they are not associated with hydatidiform mole, abortions, ectopic gestation or with normal pregnancy where the infant is normal and are not part of a germ cell neoplasm either in the gonads or elsewhere. Primary pulmonary choriocarcinomas are, therefore, unique trophoblastic tumours purely localised to the lung. Since the lungs are a frequent site of metastatic choriocarcinoma with a prevalence of 45% to 87%, the diagnosis of PPC should be made carefully by exclusion of a primary focus in the gonads, mediastinum, retroperitoneum, other midline structures and from many non-trophoblastic malignancies in the lung including conventional primary lung carcinomas which may produce or express ectopic placental hormones. Thus, in patients with PPCs, an accurate diagnosis is difficult and challenging and this prompted the authors to evaluate the surgical pathology of this rare entity.

Case report

A thirty-four-year-old young woman was admitted with complaints of fever, cough with expectoration occasionally associated with haemoptysis, pleuritic pain, and worsening breathlessness of three months duration. This patient was admitted in a primary health care unit and was started on anti-tubercular treatment (ATT) based on the chest x-ray which showed a right-sided pleural effusion. The patient had past history of occasional haemoptysis eight months before and was told that she was diagnosed with tuberculosis. She took ATT for six months and since her health condition worsened she discontinued it on her own. She became progressively more dyspnoic and she consulted her physician when she developed haemoptysis. On admission she was breathless but not cyanosed, pale; arterial blood gas values were: pH 7.45, carbon dioxide tension 3kPa, oxygen tension 10.6kPa, oxygen saturation 96%. She had dull note on percussion on the left side. Breath sounds and vocal resonance was decreased on the same side. The patient had no other major illnesses and no addictions. Her family and menstrual history were non-contributory. The possibilities of a massive left pleural effusion, or a neoplasm of the lung parenchyma/pleura were considered and the patient was investigated. Biochemical analysis and blood counts were in the normal range. Chest radiography showed complete opacification on the left side with shift

of mediastinum to the right. The ECG showed low voltage complexes. Left sided thoracocentesis failed to aspirate fluid, and the patient was therefore subjected to USG of thorax which revealed a thick-walled lesion with irregular septae and a central liquefied portion arising from either the lung parenchyma or the pleura. The USG of pelvis and a detailed gynaecological examination were normal. CT scan of the thorax revealed a large heterogenous mass with peripheral solid and central cystic component occupying the entire hemithorax and causing inversion of the left dome of diaphragm and collapse of the entire left lung with anterior displacement. Multiple, well-defined nodular shadows were seen in the right lung field, with paratracheal lymphadenopathy and minimal pericardial effusion. CT-guided biopsy revealed an undifferentiated large cell malignant tumour to be confirmed on immuno-histochemistry possibilities – being choriocarcinoma or a germ cell tumour. The given sample tested positive for beta HCG and negative for alpha fetoprotein. Serum beta HCG levels were 19 250 U/I thus confirming it to be choriocarcinoma. The patient had a stormy course with progressively increasing dyspnoea, developing syndrome vena cava superior, haemoptysis leading to respiratory failure and death before the institution of definitive chemotherapy.

Discussion

Choriocarcinoma is a germ cell tumor containing syncytiotrophoblastic giant cells and often secreting a biologicaltumor marker HCG. Lung is the most common site of metastases of choriocarcinoma (80%) followed by vagina, pelvis, brain and liver (1). Because the lung is a frequent site of metastatic choriocarcinoma, the diagnosis of the primary tumor should be made carefully. As these tumours tend to be very vascular, haemoptysis is the most frequent symptom besides dyspnoea, chest pain and cough. In our patient, metastatic disease was considered less likely in view of the absence of a primary genital tumour and absence of involvement of other organs. Pulmonary choriocarcinoma was diagnosed on the basis of the following findings: obvious lesions were found only in the lung; raised HCG levels were found both in the serum and in the urine; there was also pathologic confirmation of the disease. The origin of this tumour is still debated and several theories have been proposed for the development of primary pulmonary choriocarcinoma 1) pulmonary metastases with gonadal primary undergoing spontaneous regression; 2) pulmonary embolic lesions from abnormal products of gestation; 3) germ cell origin; 4) lung cancer undergoing embryonic metaplasia (2, 4).

As haemoptysis due to pulmonary choriocarcinoma is frequently confused with tuberculosis, the patients are often misdiagnosed leading to a delay in diagnosis as seen in our patient. A high index of suspicion will identify the patients at an earlier stage, thereby facilitating timely initiation of treatment and improving the prognosis (5).

References

1. Hainsworth JD, Greco FA. Extragonadal germ cell tumors and unrecognized germ cell tumors. Semin Oncol 1992;19:119-27.
2. Tsai JR, Chong IW, Hung JY, Tsai KB. Use of urine pregnancy test for rapid diagnosis of primary pulmonary choriocarcinoma in a man. Chest 2002; 121(3):996-8.
3. Moran CA, Suster S. Primary mediastinal choriocarcinomas: a clinicopathologic and immunohistochemical study of eight cases. Am J Surg Pathol 1997;21(9):1007-12.
4. Tanimura A, Natsuyama H, Kawano M, Tanimura Y, Tanaka T, Kitazono M. Primary choriocarcinoma of the lung. Human Pathology 1985;16:1281-4.
5. Aparicio J, Oltra A, Martinez-Moragon E, Llorca C, Gomez-Aldaravi L, Pastor M. Extragonadal non-gestational choriocarcinoma of the lung: a report of 3 cases. Respiration 1996;63(4):251-3.

PRIMARNI PULMONARNI HORIOKARCINOM- PRIKAZ BOLESNIKA

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U literaturi je opisano svega dvadesetak primera primarnih pulmonarnih horiokarcinoma. Za razliku od gestacijskog horiokarcinoma, koji dobro reaguje na hemioterapiju i ima dobru prognozu, čak i u slučajevima kad se otkrije kasnije, pulmonarni horiokarcinom vodi brzom fatalnom ishodu. Razlog je nepoznat. Ovim radom prikazujemo slučaj trideset godina stare bolesnice sa kliničkom slikom kašlja, iskašljavanja, povremeno sa hemoptizijom, pleuralnim bolom, nedostatkom daha i febrilnošću, sa radiografskim nalazom pleuralne efuzije levo, koja je lečena kao slučaj tuberkuloze 3 meseca. Ginekološki nalaz bio je uredan. Progresivno, brzo pogoršavanje opšteg stanja, stepena dispnee, epizoda hemoptizija, doveli su do respiratorne insuficijencije, pre nego što je ordinirana odgovarajuća terapija. U slučajevima hemoptizije treba razmišljati i o ovom retkom malignom entitetu, kao i proveriti nivo humanog horionskog gonadotropina kod žena. *Acta Medica Medianae 2010;49(4):43-44.*

***Ključne reči**: gestacijske trofoblastne bolesti, hemoptizije*