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PRIMARY PULMONARY CHORIOCARCINOMA - A RARE CASE REPORT - DIAGNOSIS AND TREATMENT CHALLENGES

General Medicine

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ABSTRACT

Primary Pulmonary Choriocarcinoma is a highly malignant intrapulmonary trophoblastic tumour affecting young individuals producing hCG. 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 germ cell neoplasm either in the gonads or elsewhere[1]. Since the lungs are a frequent site of metastatic choriocarcinoma with a prevalence of 45% to 87%,[2] the diagnosis of Primary Pulmonary Choriocarcinoma should be made carefully by exclusion of a primary focus in gonads, mediastinum, retroperitoneum, other midline structures and from non-trophoblastic malignancies in the lung including conventional primary lung carcinomas which may produce or express ectopic placental hormones. Here we discuss a similar case of a 28 year old women with Primary Pulmonary Choriocarcinoma.

KEYWORDS

Primary Pulmonary Choriocarcinoma

BACKGROUND

Primary Pulmonary Choriocarcinoma is a highly malignant intrapulmonary trophoblastic tumour affecting young individuals producing human chorionic gonadotropin (HCG). Despite its relative infrequency it requires an early and accurate diagnosis for proper management by distinguishing it from primary conventional lung carcinomas and metastatic choriocarcinomas [3]. The objective of this publication is to differentiate whether the tumor is a Metastatic choriocarcinoma of lung or a Primary lung tumor with ectopic beta hcg production or a Primary pulmonary choriocarcinoma.

CASE:

A 28 year old female patient presented with dry cough, chest pain, haemoptysis and breathlessness for one month. Patient had history of two previous live child births followed by Bilateral Tubal ligation before 4 years. On examination patient has reduced chest movements on left hemithorax and dull note on percussion on left hemithorax. Chest X-ray was suggestive of homogenous soft tissue opacity in left hemi thorax.

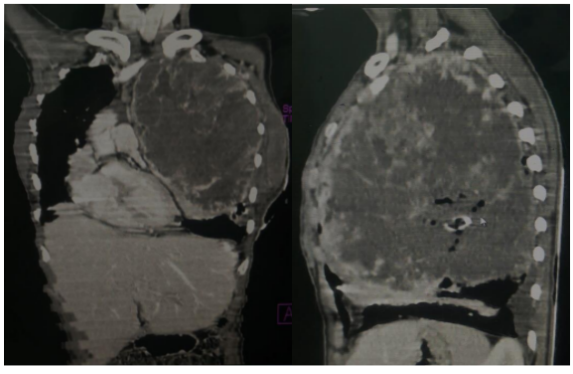

Fig 1

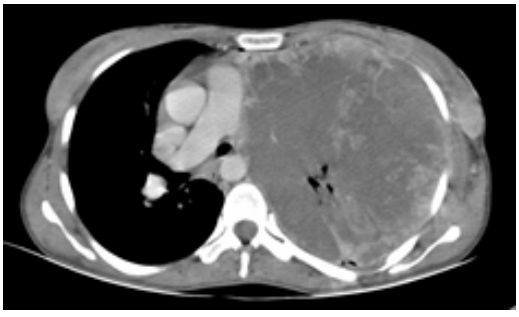

Fig 2

Contrast enhanced computer tomography thorax (Fig 1 & 2) was suggestive of malignant mass lesion in left thoracic cavity with central necrosis with metastatic mediastinal lymphadenopathy. Computer tomography guided lung Biopsy was done and histopathological examination came as poorly differentiated necrotic malignant tumour (Fig 3) to be confirmed by immunohistochemistry. Her Serum beta HCG level was 56000 mIU/ml. Immunohistochemistry on patients biopsy sample revealed beta HCG positive and Thyroid transcription factor 1 (a marker for pulmonary origin) as negative.

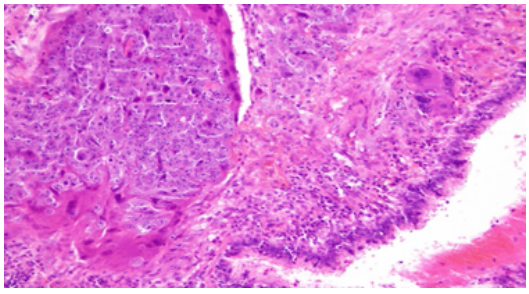

Fig 3

Computer tomography abdomen with pelvis organs screening showed no evidence of any primary pelvic organ tumour. With above supportive investigation a diagnosis of **Primary Pulmonary Choriocarcinoma** was made.

Patient was treated with neoadjuvant chemotheraphy (Methotrexate based regime) as advised by oncologist. After three cycles of chemotherapy repeat beta HCG was done and it was found to be 245 mIU/. Patient improved symptomatically as tumor activity was reduced. Repeat CECT thorax did not show significant reduction in size.

DISCUSSION

Primary pulmonary choriocarcinoma is a rare disease. Worldwide only 42 cases have been reported [4]. It is important to differentiate Primary pulmonary choriocarcinoma from metastatic choriocarcinoma as this is a cancer of genital organs. It should also be differentiated from other primary lung carcinoma with ectopic beta HCG production. Various theories for development [3] of Primary pulmonary choriocarcinoma has been postulated : neoplastic transformation of misplaced primordial germ cells, spontaneous regression of an occult genital primary leaving behind pulmonary metastatic lesions, neoplastic transformation of placental emboli at the time of delivery or abortion, and neoplastic transformation of somatic neoplastic cells. Levels of beta HCG aids in both diagnosis as well as monitoring treatment response. Though surgery is the treatment of choice it is not done as first choice in all cases due to its size, location and involvement of vital organs.

CONCLUSION

Primary Pulmonary Choriocarcinoma even though is rare it requires an early and accurate diagnosis for proper management by distinguishing it from primary conventional lung carcinomas and metastatic choriocarcinomas. Any young female of reproductive age group presenting with hemoptysis serum beta HCG must be evaluated to rule out choriocarcinoma.

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