Case Report

Lung Cancer Presenting with Choroidal Metastasis in a Pregnant Woman

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Abstract

A 28-year-old, non-smoker pregnant woman who was initially diagnosed to have deep vein thrombosis and pulmonary thromboembolism earlier in pregnancy, presented at 22 weeks of gestation with dyspnoea, visual loss initially in the right eye and then in the left eye. Fundoscopic examination revealed metastatic foci, suggestive of choroid metastases. Computed tomography of the chest revealed a right hilar mass. Fibreoptic bronchoscopy and bronchoscopic biopsy confirmed lung adenocarcinoma. As the patient and family wished to continue with the pregnancy, chemotherapy with cisplatin and was administered from the 31st week of pregnancy and she had undergone Caesarian section in the 32nd week and the baby was healthy. We report this case as it is probably the first reported case of lung cancer presenting with choroidal metastasis in a pregnant woman. **[Indian J Chest Dis Allied Sci 2014;56:249-251]**

Key words: Ocular metastasis, Lung cancer, Pregnancy.

Introduction

Pregnancy with cancer is a challenging situation; 1 in every 1000 pregnancies is complicated with cancer.[1] Because of the rare association, there are few published studies about cancer in pregnant women. The most common cancers encountered during pregnancy are breast and cervical cancer. The link between pregnancy and lung cancer is weak. In a review article published in 2009[2], it was reported that 44 lung cancer patients were diagnosed and/or treated during pregnancy. Increased occurrence of lung cancer in pregnancy has been thought to be due to increased tobacco smoking in young women and the tendency for women to delay pregnancy to a later age.[3]

Diagnostic procedures and treatment modalities for cancer in pregnancy are challenging because of risk of foetal toxicity. Therapeutic abortion has been used as an option but sparse data are available regarding its effect on maternal prognosis.[4] If the patient decides to continue her pregnancy, then chemotherapy appears to be the choice of treatment after the first trimester of gestation. We report the rare case of a pregnant woman presenting with visual loss in the right eye due to ocular metastasis in whom investigations established the diagnosis of lung cancer.

Case Report

A 28-year-old, non-smoker pregnant woman was admitted to the hospital at 22 weeks of gestation with dyspnoea, chest pain and pedal oedema. She was from Diyarbakir, a city of Turkey well-known for asbestosis exposure. At admission, she was diagnosed to have deep thrombosis and pulmonary embolism on doppler ultrasonography and lung perfusion scintigraphy. Anticoagulation with enoxaparin was begun and her dyspnoea improved with this treatment. At the 30th week of pregnancy, she again presented with visual loss in the right eye and headache. Fundus examination revealed metastatic foci suggestive of malignancy (Figure 1). The consultant ophthalmologist conisdered the possibility of ocular malignant melanoma and decided to perform enucleation. On the cranial and orbital magnetic resonance imaging (MRI), a 11mm x 6mm lesion was noticed at posterior part of the right globe; it was not possible to differentiate whether this was a mass lesion or a haematoma. However, in a few days, the patient developed loss of vision in the left eye as well.

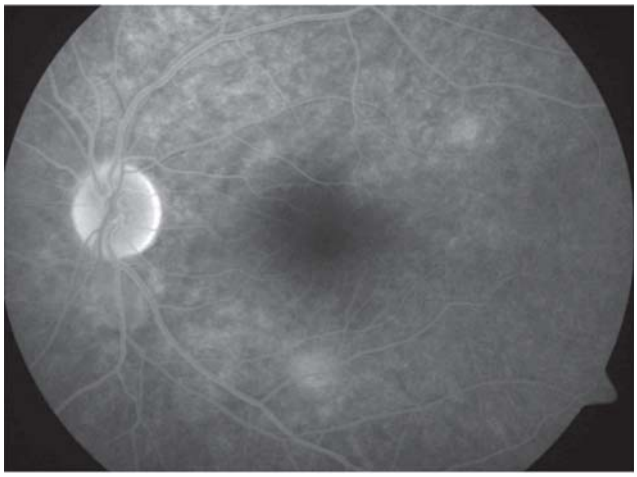

Figure 1. Fundus photograph of the right eye demonstrating metastatic foci.

[Received: July 22, 2013, accepted after revision: January 18, 2014]

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Chest radiograph revealed pulmonary infiltrates at upper zone and hilar region of the right lung. Considering the possibility of tuberculosis being the possible cause of both pulmonary and ocular lesions, enucleation was deferred and the patient was worked-up further. Computed tomography (CT) of the thorax revealed infiltratrates in the right upper lobe that were centrally located, right hilar lesion and minimal pleural effusion on the right side (Figure 2).

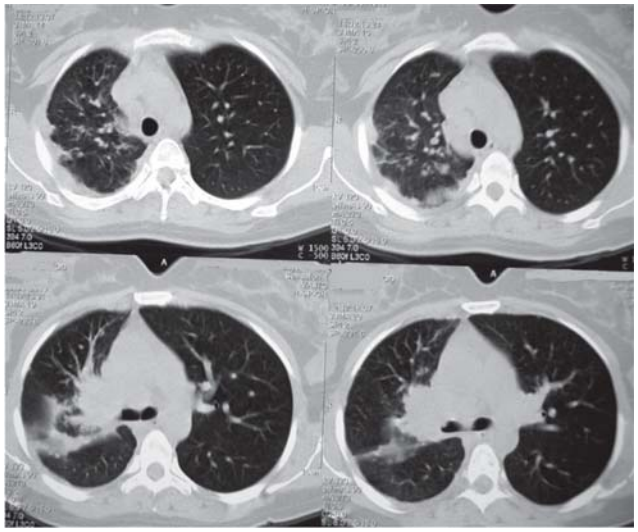

Figure 2. Computed tomography of chest demonstrating a centrally located lesion on the right side. Right pleural effusion can also be seen.

Flexible fibreoptic bronchoscopy revealed that the orifice of right upper lobe was obliterated totally with external compression and mucosal infiltration. Bronchoscopic biopsies were obtained from the lesions. Retinal angiography was suggestive of ocular metastasis. Histopathological examination of bronchoscopic biopsies were suggestive as primary lung adenocarcinoma. Because of insistence of the patient and her family to continue with the pregnancy, after consultation with the oncologist and gynaecologist, chemotherapy with weekly cisplatin and vinorelbin was started in the 31st week of pregnancy. No other adverse effect of chemotherapy was observed except emesis. At the 32nd week, pregnancy was terminated by Caeserian section; and the baby was healthy. The patient continued to receive anticoagulant treatment and chemotherapy. On follow-up, there was no improvement in visual function of the patient, but the baby continued to do well and was healthy. The patient died after 10 months of follow-up due to metastatic cancer and its complications.

Discussion

Occurrence of cancer during pregnancy is uncommon and occurrence of lung cancer during pregnancy is rare.[1,2] In a recent review,[2] it was reported that majority of the 44 cases of lung cancer seen during pregnancy were adenocarcinoma. More than 90% of these were at an advanced stage and were not suitable for surgical resection and the prognosis was thought to be poor.[2,4] Our patient had presented with Stage IV adenocarcinoma of the lung with choroidal metastasis. She had received systemic chemotherapy as cisplatin and vinorelbin combination weekly. In breast and lung cancer, administering chemotherapy while continuing with the pregnancy has been attempted. It has been reported that cisplatin-based chemotherapy combined with paclitaxel or vinorelbin after the first trimester has high tolerability and low toxicity.[5] In the literature, 8 pregnant lung cancer patients have been reported to have received chemotherapy and serious foetal outcome was not observed in any of them.[2]

Our patient was a non-smoker and was young as well. Women appear to have increased susceptibility to tobacco carcinogens. In a large analysis of more than 16,000 young adults with a history of active smoking, women had a double risk of developing lung cancer compared to men.[6] We presume the aetiology of lung cancer in our case could be potential asbestosis exposure in the region where she lived or passive smoking.

Signs and symptoms in a patient with lung cancer may occur either due to the original tumour in the chest or due to distant metastases. Median gestational age at the time of diagnosis has been osberved to be 27 weeks.[2] Diagnostic delay is frequently evident due to the reluctance in performing radiological investigations and the non-specific nature of the early symptoms of the disease.[2] In pregnant woman, chest radiograph can be done by abdominal shielding to protect foetus and MRI can be done instead of CT to avoid foetal radiation exposure.[7]

Choroid is the most common site for orbital metastasis.[8] Ocular metastasis secondary to lung cancer is rarely seen and is estimated to constitute 7% of the choroidal metastases.[9] Usually systemic chemotherapy is considered enough for choroidal metastasis, if the primary tumour is chemosensitive. Choroidal metastasis as the first sign of lung cancer has been observed in 55 cases; the most common histopathological type was adenocarcinoma as in our report.[10] *Our case is unique for probably being the first reported case of lung cancer presenting with choroidal metastasis in a pregnant woman.*

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