ORIGINAL RESEARCH PAPER
Volume-7 | Issue-12 | December-2018 | PRINT ISSN No 2277 - 8179
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

METASTASIS MASQUERADING AS LUNG ABSCESS- A RARE CASE REPORT.

Medicine

Gayathri G Assistant Professors Department of Respiratory Medicine Saveetha Medical College, Thandalam.

Sathish Kumar M Assistant Professors Department of Respiratory Medicine Saveetha Medical College, Thandalam.

Kalyani Sri Koneru* Assistant Professors Department of Respiratory Medicine Saveetha Medical College, Thandalam. *Corresponding Author

Gangadharan G Professor & Hod, Department of Respiratory Medicine Saveetha Medical College, Thandalam.

ABSTRACT

Co- existence of multiple malignancies in a patient with different cell line is a very rare presentation. These type of occurrence is probably due to exposure to various carcinogens and genetic mutation mediating the carcinogenesis. There are various case reports in the literature about genetic predisposition due to mutation involving hereditary non-polyposis colorectal cancer (HNPCC) with synchronous and metachronous occurrence of malignancies of renal, ureteral, ovarian and endometrial cancers. Such patients present with varied clinical presentation which may often be misleading causing a delay in diagnosis and progression of staging of the disease. Here we report a case of 75-year-old male who has underwent radical cystectomy for transitional cell carcinoma of bladder 10 years ago, on preoperative pulmonary risk assessment of thyroidectomy with follicular carcinoma of thyroid, Chest radiograph revealed a cavitating lesion with air-fluid level in the right upper lobe of lung which was initially thought to be aspiration pneumonia complicated with lung abscess following an event of cerebrovascular accident 2 months ago from the current presentation. Bronchoscopic examination revealed no evidence of intraluminal malignancy and bronchoscopic brush and wash from right upper lobe was negative for malignancy. CT guided biopsy of the right upper lobe lesion showed transitional cell carcinoma deposits from primary carcinoma of bladder. This case presented for sensitizing on the rare occurrence of dual malignancies in a patient with rare presentation of carcinomatous deposits from TCC of bladder presenting as cavitory lesion.

KEYWORDS

transitional cell carcinoma, follicular carcinoma of thyroid, cavitating secondary deposits.

INTRODUCTION:

Occurrences of second primary malignancy in cancer patient with two different cell line origin is an extremely rare condition where studies quote incidence of about 10% with the relative risk of 1.08-1.3% in a known cancer patient(1,2). Clinical picture may be misleading in the cases with dual malignancies with multiple events occurring in a patient simultaneously. The incidence of dual malignancies in a patient imposes high risk of cerebrovascular event about 15% which may be followed by increased risk of aspiration pneumonia which may progress to lung abscess in an immunocompromised host(3). Although most common cavitating lesion in a lung are mostly commonly due to infective etiology like tuberculosis in Indian scenario, consideration must be made about the other non-infective etiologies in a patient with dual malignancy. Among the lung malignancies, most common cell type to cavitate is squamous cell carcinoma although there are other secondary deposits to the lung with primary from skin, head and neck malignancies will show cavitation but secondary from transitional cell carcinoma very rarely cavitate. Transitional cell carcinoma (TCC) of bladder is locally invasive tumour which uncommonly breach from its muscular wall, though metastasis to regional pelvic nodes has been reported. But distant metastasis of TCC to liver, lung, mediastinum, bones and adrenals do occur. Most common presentation of lung metastasis from transitional cell carcinoma is in the form of nodules/ or an interstitial pattern(4) .This case report is presented to sensitize the treating physician to be aware of such rare possibilities among patients with dual malignancies.

Case discussion:

A 75-year-old male came to OPD for pulmonary risk assessment for thyroid surgery. He had complaints of fever, cough with sputum production for 3 months. He had no history of hemoptysis, wheeze or chest pain. But he had significant loss of weight and appetite. He had a swelling in the thyroid region which was increasing in size over 3 months. He had undergone radical cystectomy with ileo-caecal conduit for transitional cell carcinoma of bladder 10 years ago and had completed chemotherapy. He was admitted elsewhere for left hemiparesis 4 months ago where CT brain revealed infarct in right frontal region. Chest x-ray revealed cavity in the right upper lobe of the lung. Initial suspicion of right upper lobe cavity was probably presumed to be aspiration pneumonia progressing to a lung abscess. He was managed with intravenous antibiotics for 10 days and he was switched over to oral antibiotics later. He is a smoker with 8 pack years and betel nut chewer. He is not a known diabetic nor hypertensive.

General examination of the patient revealed multiple lymph nodes of variable size where the significant one was 3.5 ×2 cm in the right upper cervical region. A swelling in right lobe of thyroid noted with 6×5 cm moving with deglutition. Respiratory system examination was within normal limits. Examination of other systems was normal. Chest x-ray revealed a significant increase in the size of cavitating lesion(fig-1) when compared with previous chest x-ray. CT neck showed a swelling in the right lobe of thyroid(fig-2) and CT thorax done showed a cavity in the right upper lobe anterior segment with multiple nodular lesions in both lower lobes(fig-3,4). Biopsy of significant lymph node suggested secondary deposits from follicular carcinoma of thyroid. Bronchoscopy was performed where there was no evidence of pus or intraluminal mass. Bronchoscopic brush and wash showed no evidence of malignancy and bronchial wash did not grow any organisms. Later CT guided biopsy taken from right upper lobe lesion was done and yielded a surprising report of secondary deposits from TCC of bladder. He was submitted for chemotherapy as he will be a poor candidate for surgery. The patient was on follow up and later died after 8 months.

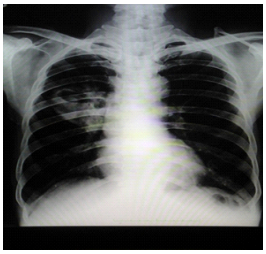

Fig-1-chest X-ray PA view showing a cavity with air fluid level in right upper zone.

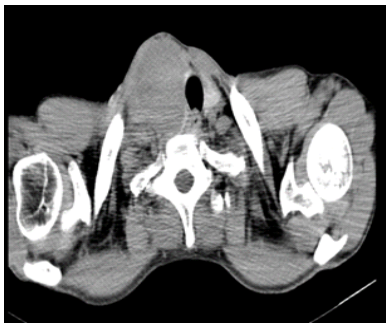

FIG-2-CT neck shows enlargement of right lobe of thyroid

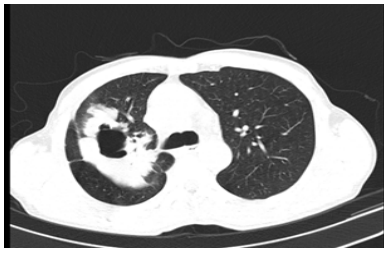

Fig-3-CTchest showing thick walled cavity with the right upper lobe anterior segment.

fig-4-CT chest shows multiple nodular deposits in right lower lobe

DISCUSSION:

Metachronous occurrence of neoplasms in a known cancer patient is relatively very rare contributing to about 10%(2). Multiple malignancies occurring in a patient is probably due to seed and soil hypothesis involving multiple factors where environmental factors with frequent exposure to carcinogen like smoking as in this case and genetic mutation implicated for occurrence of dual malignancies. Although transitional cell carcinoma has been strongly associated with smoking, there are studies quoting inverse relationship of smoking with follicular cell carcinoma of thyroid where smoking actually offers protection against thyroid malignancies and prevalence of thyroid malignancies is more common among females than male unlike this present case(5). With the underlying process of atherosclerosis due to smoking, this present case has multitude of risk factors for the evolution of thromboembolic event. There are various mechanisms like cancer coagulopathy due to tumour cell, cytokines induced inflammatory process, tumour embolism, chemotherapy related coagulopathies that precipitates a thromboembolic event (3). This present case with dual malignancies caries an amplified risk of thromboembolic event. With the immunocompromised state in cancer patient, aspiration pneumonia following stroke which may progress to lung abscess if not treated adequately. The lung abscess in chest X-ray appears as an air and fluid filled lesion due to the necrosis of lung parenchyma most commonly due to infective etiologies(6). Squamous cell carcinoma are the primary malignancies in the lung to show cavitation which was actually anticipated in this case. But the secondaries most commonly presenting as cavity are primary from skin, head and neck malignancies. Radiological presentation of secondaries in the lung from TCC is usually in the form of mass or micro nodular or interstitial pattern(7). Cavitation from transitional cell carcinoma of bladder is an uncommon presentation where few cases have been reported. Recurrence free survival rate for urothelial carcinoma ranges from 61.7% to 76% at 5 years and 55.2% to 73% at 10 years(8).

CONCLUSION:

This case is reported for its rarity where the occurrence of metachronous malignancy of two different cell line origin with uncommon radiological presentation of transitional cell carcinoma in the form of cavitory deposit in the lung. This case report also exhibits uncommon association of follicular cell carcinoma of thyroid in a male smoker where smoking actually lessens the risk of development of thyroid malignancies. Diagnosis of metachronous malignancy has implications for prognosis influencing modality of treatment.

REFERENCES:

1. Preeti Rihal Chakrabarti et al-Spectrum of Second Primary Malignant Neoplasms in Central India: Case Series from a Tertiary Care Centre Nigerian Postgraduate Medical Journal Nigerian Postgraduate Medical Journal -Oct-Dec 2015 ,Volume 22 ,Issue 4
2. Bittorf B, Kessler H, Merkel S, Brückl W, Wein A, Ballhausen WG, et al.Multiple primary malignancies: An epidemiological and pedigree analysis of 57 patients with at least three tumours. Eur J Surg Oncol 2001;27:302-13.
3. Oh Young Bang et al- Ischemic Stroke and Cancer: Stroke Severely Impacts Cancer Patients, While Cancer Increases the Number of Strokes-REVIEW J Clin Neurol 2011;7:53-59
4. Webb WR, Muller NL, Naidich DP. High resolution CT of the lung. 4th ed. Philadelphia: Lippincott Williams & Wilkins; 2011
5. Natasha E bufalo et al -Smoking and susceptibility to thyroid cancer-inverse association with CYP1A1 allelic variants- Endocrine-Related Cancer (2006) 13 1185–1193 1351–0088/06/013–1185 2006 Society for Endocrinology.
6. Taira N. et al.: Lung cancer mimicking lung abscess formation on CT images -Am J Case Rep, 2014; 15: 243-245
7. Stanford M et al- Metastatic transitional cell carcinoma of bladder: Radiological manifestations-AJR 132:419-425, March 1979 American Roentgen Ray Society
8. Ilias Cagiannos et al- Surveillance strategies after definitive therapy of invasive bladder cancer -Can Urol Assoc J2009;3(Suppl4):S237-42.