Original Research Paper

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Respiratory Medicine

CAVITARY LUNG CARCINOMA PRESENTING AS SUBCUTANEOUS EMPHYSEMA-A CASE REPORT.

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KEYWORDS :

INTRODUCTION:

Subcutaneous emphysema occurs through bronchocutaneous fistula is an extremely rare complication of lung cancer and is the extended version of a bronchopleural fistula-a direct communication between the pleura and bronchial system or the lung parenchyma.

Most bronchopleural fistula are post operative complication of surgical resection of lung,secondary to chemotherapy,radiation treatment,chronic inflammation or infection or a result of internal or external chest trauma.

We report one a case of subcutaneous emphysema occured through bronchocutaneous fistula in a lung cancer with a most comman histologic subtype-squamous cell carcinoma patient.

CASE REPORT: A-65-years-old male,chronic smoker,security worker admitted to the department of pulmonary medicine with 2 weeks history of fever,dyspnea on exertion,cough without expectoration,right side mild chest pain and subcutaneous emphysema on right side chest wall and with single episode of scanty hemoptysis.There was documented history of 5 kg weight loss in last 2 months.

Patient was not having any comorbidities and any past history of previous surgery,chemotherapy,radiotherapy,chronic infection or trauma and also no any significant family history.

EXAMINATION: Patient was febrile on touch,hemodynamically stable,no tachypnoea,digital clubbing of grade-3. Spo2 was 95% on room air.

On palpation of right upper chest wall,there were palpable crepitations present.No any palpable cervical or axillary lymphnodes.
On auscultation decreased breath sounds on right side.

INVESTIGATION,DIAGNOSIS AND MANAGEMENT: Chest radiograph demonstrated localised subcutaneous emphysema on right side chest wall and cavitory lesion in right upper zone and mid zone of lung with obliteration of right CP angle.Emphysematous changes in both lungs fields.

Hematological examination including CBC,coagulation profile,renal and liver function test all within normal range.blood culture was negative.

Sputum examination including sputum culture and sensitivity - negative,sputum cytology-no any malignant cells seen,gene-expert of sputum was negative for M.T.B.

Usg chest suggested consolidation in right upper and mid zone of lung,right side minimal pleural effusion with local air foci noted in soft tissue plane over right side chest wall, suggestive of subcutaneous emphysema on right side chest wall.

CECT-CHEST was showing a well defined thin walled cavitory lesion of size 121×72×126 mm with air fluid levels within is noted in right upper lobe of lung with subcutaneous emphysema in chest wall on right side.right sided mild pleural effusion is noted with air foci within segmental collapse of right upper and lower lobes of lung is noted with ill defined heterogeneously enhancing soft tissue in apicoposterior segment of right upper lobe of the lung and right lower lobe of lung .possibility of neoplastic lesion with secondary infection.

Possible initial treatment steps includes : bed rest,high flow oxygen therapy,analgesics,antitussive and antibiotics treatment.

CLINICAL SUSPICTION: Initial differential diagnosis included previous surgery,post chemotherapy or radiotherapy,post traumatic with secondary infection,chronic infection and rarely secondary to primary neoplasm-squamous cell carcinoma(most common) and adenocarcinoma(rare) invading the chest wall with or without infection.

Our case did not have any sign of acute infection,did not have a history of trauma ,previous surgery, chemotherapy or radiaton treatment as he did not have a diagnosis of lung cancer before admission to our hospital.

Later on patient underwent CT guided lung biopsy from right cavitory lung mass followed by pathological examination revealed a well differentiated squamous cell carcinoma of lung.Then patient was referred to oncology hospital.

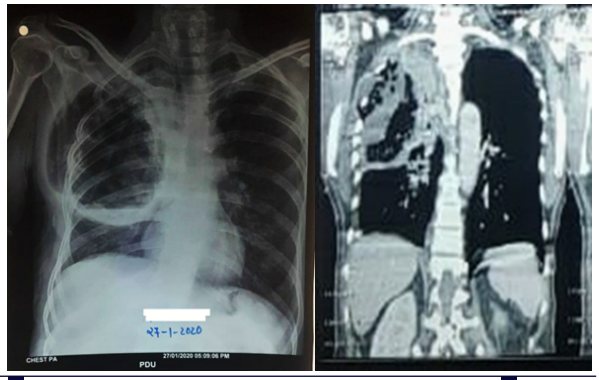
DISCUSSION AND CONCLUSION:

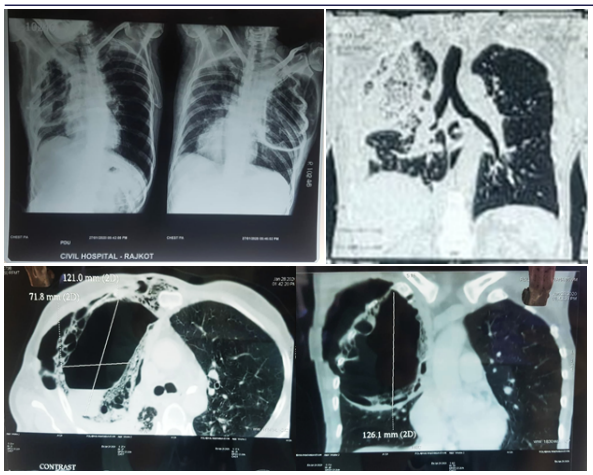
Pulmonary neoplasms are extremely rare cause of subcutaneous emphysema occurs through bronchocutaneous fistula.

It is well stated that x-ray is usually sufficient for diagnosis,Chest CT is the diagnostic test of choice for visualization,localization and diagnosis of bronchocutaneous fistula leading to subcutaneous emphysema.

We conclude that a cavitory lung carcinoma invading the chest wall may lead to subcutaneous emphysema without causing pneumothorax or pneumomediastinum and in absence of previous surgery or radioation or chemotherapy or trauma or infections history.

Thus careful assessment and timely intervensions could lead to early therapeutic interventions and ultimately better outcomes.





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