
Recurrent subcutaneous emphysema in a treated pulmonary tuberculosis patient: Is there any association?

Sir,

A 55-year old nondiabetic, nonhypertensive, and nonsmoker female presented with dyspnoea for 1 month and swelling of face, neck, upper limb, and trunk for 2 weeks. Dyspnoea was gradual in onset, progressive, causing limitation of her daily activities. There was no history of palpitation, orthopnoea, paroxysmal nocturnal dyspnoea, and edema, or chest pain. The swelling started slowly, involving the neck and gradually involved face causing periorbital swelling and later involved upper part of trunk and upper limbs [Figure 1]. The patient had a past history of tuberculosis for which she was treated completely and declared cured 5 years ago. Examination revealed swelling of face, neck, upper limbs with crepitus all over. Trachea was shifted toward the right side. Chest examination revealed harsh vesicular breath sounds with scattered coarse crepitations. An urgent chest x-ray was done that showed subcutaneous emphysema without any evidence of pneumothorax. Areas of fibrosis were

noted in bilateral lung parenchyma. The patient was given high flow oxygen at the rate of 10 L/min, superficial surgical incisions were given at the level of thoracic inlet for the subcutaneous emphysema, but without of much benefit. CT scan of thorax showed gross bilateral subcutaneous emphysema, pneumomediastinum, minimal pneumothorax, and fibrotic changes in bilateral lung parenchyma [Figure 2]. In due course of time, other investigations were done that showed a negative mantoux test and her sputum for AFB was negative on two occasions. As initial management failed to improve patient condition, 20 F intercostal chest drainage tubes were put bilaterally under local anesthesia after consulting with chest medicine department and cardiothoracic surgery department. Two days after placement of intercostal chest drain the patient showed dramatic improvement in the form of decrease in the periorbital puffiness with generalized decrease in the amount of swelling. The chest drains were removed after one week. Consequently subcutaneous emphysema reappeared and gradually progressed in the same pattern



Figure 1: Photograph of the patient showing gross subcutaneous emphysema

as before. As the patient developed spontaneous, recurrent subcutaneous emphysema and pneumothorax, she was transferred to cardiothoracic department for pleurodesis.

The presence of air in the subcutaneous layer other than surgical causes and when the cause is not clear it is called spontaneous subcutaneous emphysema. Subcutaneous emphysema in a post-tuberculosis patient may be due to tear of adhesions between visceral and parietal layer, local airway obstruction and alveolar rupture secondary to distal airway trapping.^[1,2] Cavitory pulmonary tuberculosis leading to subcutaneous emphysema without pneumothorax or pneumomediastinum is extremely rare.^[3] Surprisingly, in this patient the amount of pneumothorax was too small to be diagnosed by X-ray. Simultaneous bilateral involvement is also not common. Here the case was treated completely for pulmonary tuberculosis and declared cured 5 years ago. At the time of this episode there was no suggestion of active tuberculosis but rather we encountered a delayed, difficult to control complication of old tuberculosis.

Tony Ete, Sumantra Mondal, Debanjali Sinha, Arijit Nag,

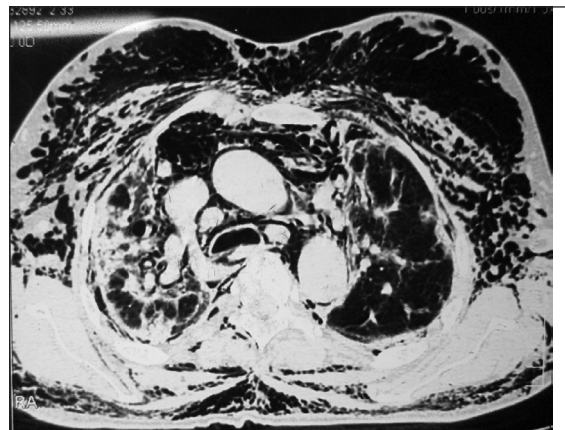


Figure 2: CT scan of thorax showing gross bilateral subcutaneous emphysema, pneumomediastinum, minimal pneumothorax, and fibrotic changes in bilateral lung parenchyma

Atanu Chakraborty, Jyotirmoy Pal, Alakendu Ghosh¹

*Departments of Medicine and ¹Medicine and Rheumatology and Clinical Immunology, Institute of Post Graduate Medical Education and Research, Kolkata, West Bengal, India
E-mail: drmsumantra@gmail.com*

REFERENCES

1. Sarma OA. Subcutaneous emphysema in pulmonary tuberculosis. Indian J Chest Dis 1967; 9:236-8.
2. Pierson DJ. Pneumomediastinum. In: Murray JF, Nadel JA, editors. Textbook of respiratory medicine. 2nded. Vol. 2. Philadelphia: WB Saunders Company;1994. p. 2250-65.
3. Dixit R, George J. Subcutaneous emphysema in cavitory pulmonary tuberculosis without pneumothorax or pneumomediastinum. Lung India 2012;29:70-2.

Access this article online

Quick Response Code:



Website:

www.lungindia.com

DOI:

10.4103/0970-2113.129901