Superior Tubercular Mediastinal Cyst Presenting As A Neck Mass

S Verma, K Narayan

Citation

S Verma, K Narayan. *Superior Tubercular Mediastinal Cyst Presenting As A Neck Mass*. The Internet Journal of Pulmonary Medicine. 2008 Volume 10 Number 2.

Abstract

We describe a case of Tuberculous cyst in the superior mediastinum presenting curiously as a supraclavicular swelling. Diagnosis was confirmed by doing a CT scan and FNAC of the neck swelling. Patient was successfully treated with a six month course of antituberculous chemotherapy.

INTRODUCTION

Mediastinal tuberculous cyst is a rare entity in litereature.A study on the cysts of the mediastinum for a period of twenty two years had revealed only two cases of cystic tuberculosis of the mediastinum. [1] Despite the fact that tuberculosis is an endemic in places like India, meagre data is available regarding this variety of extrapulmonary tuberculosis. To the best of our knowledge even after extensive search of the English-language medical literature, both print and electronic, we could not come upon this presentation. Here we present a case of Tuberculous mediastinal cyst in the superior mediastinum which was diagnosed and managed conservatively by a six month course of antitubercular chemotherapy.

CASE REPORT

A 21 yr old female student was admitted to our department with chief complaints of loss of appetite, low grade fever, weight loss and right sided chest pain for the preceding five months. She also complained of a swelling in the neck for last two months. She denied any history of breathlessness or hemoptysis. Past history revealed multiple episodes of seizures in the preceding 10-12 yrs. She was diagnosed by a neurologist to have epilepsy with random tonic clonic seizures which was of idiopathic origin and was controlled on antiepileptic drugs. Clinical examination revealed pallor. No icterus was present on admission. Vital parameters were within normal limits. An oval swelling of size 4x3 cm was present in the right supraclavicular area which was firm, smooth with well defined borders except inferiorly ,non tender, non pulsatile and with limited mobility. There was no significant peripheral lymphadenopathy. Respiratory examination showed reduced air entry in the right infraclavicular area with dullness on percussion.Rest of the examination was within normal limits. A skiagram chest done revealed a well defined homogenous opacity without air bronchogram in the right upper zone silhouetting with the right paratracheal region.(Fig 1)There was no erosion of the ribs. Routine blood investigations showed Hb 8g%,Total count of 7000/mm $_3$,P74%,L25%,E1%,Liver function tests were normal. Rest of the blood parameters were within normal limits. Mantoux test was showing 22mm induration with 5TU.Sputum for acid fast bacilli was persistently negative on 3 occasions. Ultrasound of the neck swelling revealed a well defined round to oval hypoechoic lesion with anechoic areas. A CT scan of the thorax was done with contrast which revealed a large Cystic lesion in the superior and anterior mediastinum on Right side with supraclavicular extension suggestive of Abscess Necrotic nodes Duplication cyst(Fig 2)

A FNAC of the supraclavicular swelling was done which revealed caseating granulomas suggestive of Tuberculosis. The material aspirated was AFB smear negative and gram stain negative with culture being sterile. CT guided FNAC of the intrathoracic swelling was withheld because of close proximity to the adjacent blood vessels. Following this, the patient was started on antituberculous regimen (RHZ regimen for 2months followed by RH regimen)total duration of therapy being six months. She responded to treatment with a weight gain of 6kg and the skiagram of chest after treatment revealed disappearance of the paratracheal lesion.(Fig 3)

Figure 1

Figure 1 showing Rt paratracheal opacity

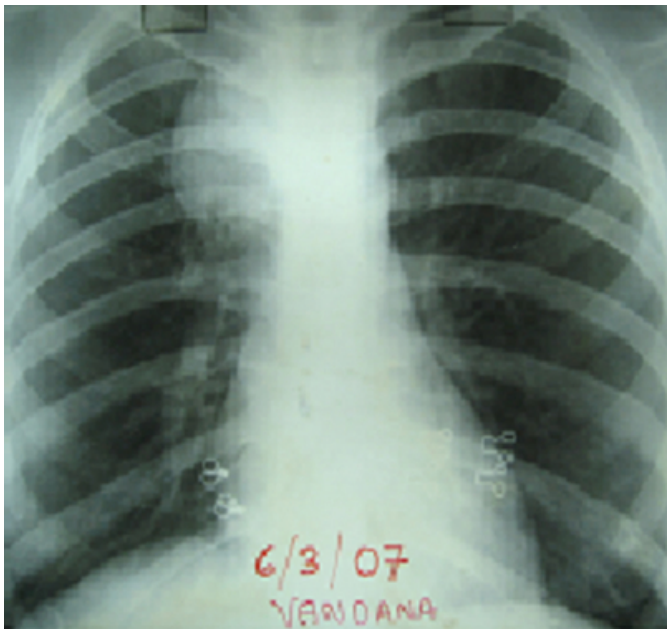


Figure 2

Figure 2 CT Thorax showing superior mediastinal cyst

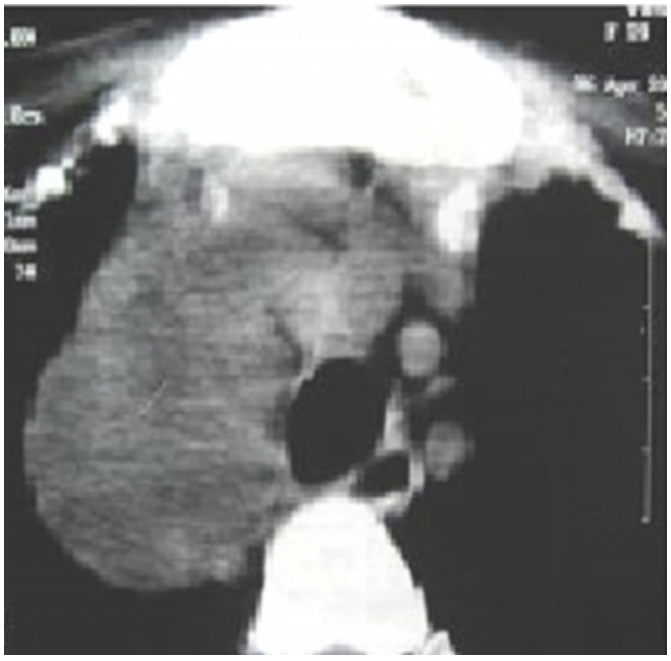
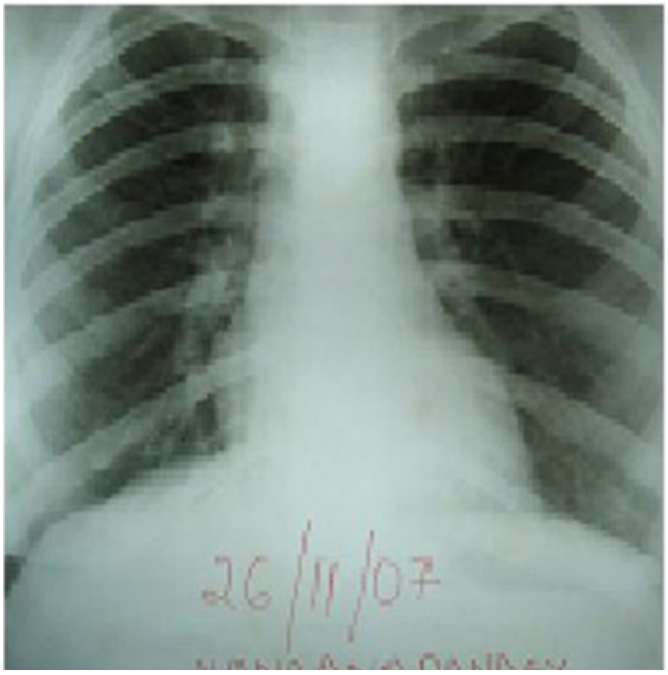


Figure 3

Figure 3 Chest Xay showing clearing of lesion



DISCUSSION

The mediastinum, in addition to containing various organs and vital structures is the site of several uncommon lesions as well as manifestations of a number of systemic diseases [2] .The mediastinum is divided into the superior and inferior (which includes anterior, middle, and posterior) compartments. In the anterior mediastinum, the most common adult tumor is the thymic tumor: thymoma, thymic cyst, or (rarely) thymic carcinoma, germ cell tumor. Posterior mediastinal lesions are predominantly of neurogenic origin, while middle mediastinal ones include a variety of tumors (some lymph node lesions, bronchial or pericardial cysts, parathyroid adenoma).A large percentage of mediastinal tumors and cysts produce no symptoms and are found incidentally during a chest radiograph or other imaging study of the thorax performed for some other reason. Symptoms are present in approximately one third of adult patients with a mediastinal cyst but are more commonly observed in the pediatric population, in which nearly two thirds of individuals present with some symptoms, because airway compression is more likely, owing to the significant malleability of the airway structures and the small size of the chest cavity. Paratracheal and carinal cysts may lead to tracheobronchial compression, which manifests as coughing, wheezing or stridor, dyspnea, regurgitation [3,4,5] .Infectious symptomatology, and even signs of sepsis, can occur if a mediastinal cyst becomes

infected. Constitutional symptoms, such as weight loss, fever, malaise, and vague chest pain, commonly occur in association with tuberculosis but also may be signs associated with malignancy or secondary infection.

Chest radiography is helpful in determining the involved compartment of the mediastinum. This information, combined with the age, sex, and associated clinical findings, aids the physician in the proper choice of subsequent diagnostic studies. Ultrasonographic methods have been used to differentiate solid from cystic mediastinal masses and to assist in determining connections between a mass and adjacent structures. CT scan of the chest and mediastinum assist in determining the exact location of the mediastinal tumour,determining its relationship to adjacent structures,differentiating masses that originate in the mediastinum from those that encroach on the mediastinum and in differentiating tissue densities especially those that are cystic or vascular from those that are solid. MRI chest is superior to CT scan for the evaluation of masses located at the thoracic inlet or at the thoracoabdominal level. Fine-needle aspiration cytology (FNAC) is used for the diagnosis of mediastinal cysts. However, most authorities do not recommend aspiration of a cyst because a sample of the cyst wall, required for diagnosis, is not obtained by this method. In our case this investigative modality was the turning point in diagnosis. Bronchoscopy with transbronchial needle FNAC/Biopsy and BAL fluid study could be performed in mediastinal masses especially central masses. TB can be identified from the cheesy material aspirated. Also any features of compression can be assessed. Treatment of mediastinal cyst can be conservative or surgical.We opted for a conservative approach with a six month course of three drug chemotherapy(paucibacillary) consisting of Rifampicin,Isoniazid and Pyrazinamide in the intensive phase,followed by Rifampicin and Isoniazid in the continuation phase [6,7] .Standard surgical therapy for mediastinal cysts consists of excision via thoracotomy.

References

1. Petkar M ,Vaideeswar P ,Deshpande JR :Surgical pathology of cystic lesions of the mediastinum. J Postgrad Med 2001;47,235-9
2. Boyd DP, Midell AI. Mediastinal cysts and tumors. An analysis of 96 cases. Surg Clin North Am 1968;48:493-505.
3. Ishimaru Y, Shibata Y, Ohkawara S, Ohshima H, Kihara S. Lymphoepithelial cystic lesion related to adenocarcinoma in the mediastinum. Am J Clin Pathol 1989;92:808-13.
4. Tanaka H, Igarashi T, Teramoto S, Yoshida Y, Abe S. Lymphoepithelial cysts in the mediastinum with an opening to the trachea. Respiration 1995;62:110-3.
5. Zambudio AR, Lanzas JT, Calvo MJ, Fernandez PJ, Paricio PP. Non-neoplastic mediastinal cysts. Eur J Cardiothorac Surg 2002;22:712-6.
6. Khan AE,Kimerling ME,Chemotherapy of tuberculosis:David Schlossberg,editors:Tuberculosis and Non Tuberculosis Mycobacterial infections.New York:McGraw-Hill.2007,pg86
7. World Health Organisation.Treatment of Tuberculosis:guidelines for national programs.WHO/CDS/TB/2003.313Geneva:WHO2003

Author Information

Sanjeev Kumar Verma, MD
Associate Professor, Department of Pulmonary Medicine, Chhatrapati Sahuji Maharaj Medical University

Kiran Vishnu Narayan, MBBS
Junior Resident, Department of Pulmonary Medicine, Chhatrapati Sahuji Maharaj Medical University