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Pancoast Tumour Misdiagnosed as Ankylosing Spondylitis

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Abstract

A 55-year old male was admitted to our hospital with neck pain along with numbness and tingling sensation in his left arm. On detailed evaluation, he was diagnosed to have Pancoast tumor. This case report presents the clinical presentation of Pancoast tumor and emphasizes the importance of its inclusion in the differential diagnosis of patients presenting with persistent neck pain.

Keywords: Pancoast tumor; Lung; Cervical

Introduction

Pancoast tumor is a tumor developing at the apex of the lung, in the area of the sulcus formed by the passage of the subclavian artery. The peripheral location of the tumor generates clinical symptoms that may easily be attributed to other causes, like musculoskeletal disorder. Pancoast tumors account for approximately 2-5% of all lung cancers and are most commonly of bronchogenic origin [1]. This case report emphasizes the need to maintain the high index of suspicion of Pancoast tumor in patients presenting with persistent neck and shoulder pain.

Case Report

A 55-year-old male presented with the complaint of progressive left sided neck and arm pain to a local physician who diagnosed him as a case of ankylosing spondylitis and prescribed analgesics. During the course of the treatment, his pain became excruciating associated with numbness and tingling into his left forearm. Then he came to our hospital for further evaluation. Detailed evaluation revealed that the patient was a heavy smoker (pack-year 30), had significant weight loss (10 kg in last 2 months) without any respiratory symptoms. On examination, general examination revealed thin built, pallor, grade-III clubbing of both fingers and toes, swelling in the left supraclavicular region extending up to side of neck. Chest auscultation revealed diminished air entry in left supra-scapular area. Other systemic evaluation was unremarkable.

His hematological and biochemical investigations were within normal limits. Chest radiograph showed a homogenous opacity in the left upper zone (Figure1). Computed Tomography (CT) thorax revealed an apical mass (3.5 cm in diameter) with direct invasion of the 1st and 2nd ribs at its dorsal aspect with no evident mediastinum involvement (Figure 2). CT guided Fine Needle Aspiration Cytology (FNAC) revealed moderately differentiated squamous cell carcinoma. Whole body PET CT, Brain MRI and bone scan did not revealed any metastatic evidence. Under a diagnosis of Pancoast tumour of the left lung (clinical stage IIB: T3NOM0), the patient underwent induction chemo-radiation therapy. Radiation therapy involved extracorporeal radiation to the primary tumour, middle/upper mediastinum and supraclavicular region in 2-Gy fractions 5 days a week for 4 weeks (total dose 40 Gy). Chemotherapy consisted of Cisplatin and Etoposide concurrently with the radiation therapy. No adverse events occurred during induction therapy. During the course of therapy, patient had relief in his symptoms.

Discussion

Pancoast tumours are an infrequent subtype of lung cancers [2]. Pulmonary symptoms in patients with a Pancoast tumour are rare because the bulk of the tumour can be extra-pulmonary leaving the underlying parenchyma of the lung unaffected except in very advanced cases. The most frequent initial symptoms associated with Pancoast tumours are musculoskeletal in nature. In fact, more than 90% of patients first present with shoulder pain, rather than with pulmonary symptoms [1,3] (as in our case). In a recent study from China [4], 73% patients of Pancoast tumour were misdiagnosed as musculoskeletal disorder & pulmonary tuberculosis. Pulmonary symptoms are rare but supraclavicular fullness with occasional auscultatory abnormality may be noted on clinical examination. Unfortunately many of the above mentioned clinical features of pulmonary involvement will be evident at a later stage of the disease.

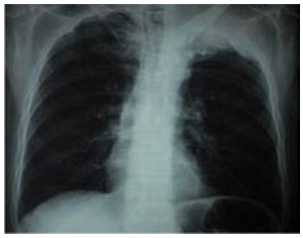

Figure 1: Chest radiograph showing a homogenous opacity in the left upper zone.

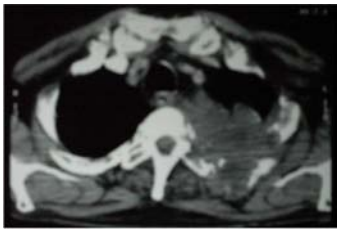

Figure 2: Computed Tomography (CT) thorax reveals an apical mass (3.5 cm in diameter) with direct invasion of the 1st and 2nd ribs at its dorsal aspect with no evident mediastinum involvement.

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However, earlier detection or the suspicion of diagnosis may be made by radiographic investigation of the upper lung field [5]. This may be accomplished by careful inspection of the radiographs of the shoulder or neck, or more appropriately by a chest radiograph series. An adequate chest radiograph should include an apical lordotic view and, a full size Posteroanterior (PA) and lateral chest views [3]. Typically in patients with a Pancoast tumour, these views will reveal a small homogenous opacity in the apical region of the lung, with the occasional evidence of bone erosion [3]. Sadly, misdiagnosis appears to be common rather than the exception in Pancoast tumours. The patient will have usually been treated for a variety of conditions attributed to the neck, shoulder and arm. These conditions include thoracic outlet syndrome, cervical disc disease or an intrinsic disorder of the shoulder [2,3,5].

A diagnosis of Pancoast tumour should always be considered in middle aged patients with a history of smoking who present with complaints of persistent shoulder and arm pain. In these patients, the presence of a "normal" physical and radiological examination of the shoulder should provoke the clinician to consider ordering special chest views in order to visualize the superior sulcus. Early diagnosis is crucial as prognosis is directly dependent on quick treatment.

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