Macleod's Syndrome

Pages with reference to book, From 76 To 78

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Abstract

A young tailor with dysponea on exertion of 5 years duration, was examined investigated and diognosed as Macleod's Syndrome. He is advised to take Salbutarnol occasionally and antibiotics alongwith corticosteriods for short periods during the episodes of pulmonary infection.

Introduction

Macleod (1954) drew attention to patients whose chest radiographs showed unilateral hyper ransradiancy. Though a rarity but it has aroused considerable interest. It was found that the pulmonary artery on the effected side was often small and angiograms showed a poor blood supply. Resected specimens revealed evidence of previous widespread patchy bronchiolitis or sometimes bronchitis. It seems likely that this dates from childhood. In some children this condition develops 6 months to 5 years after a viral bron. chiolitis. Some cases have probably been secondary to tuberculosis in childhood (Crofton and Douglis 1975; Cvmrning et al, 1971; Editorial, 1971; MakoLn, 1974; Reid and Simpson, 1062).
Syndrome
"This unilateral emphysema involving the whole lung may result from bronchitis and bronchial obstruction which interferes with the lung development in childhood".

Case Report

M.K. a young tailor of 16 years gave a history of exertional dysponea of 5 years duration with febrile illness and productive cough on most of the days during winter. He had noticed a bony prominence on the front of the chest since then. He used to smoke 5-10 cigarettes per day for the last 8 years. Examination of the respiratory system showed a pigeon chest of moderate degree, respiratory rate of 36 and pulse 90 per minute with restricted movements on left side of chest and respiration mostly abdominal in type. The trachea was deviated towards the left side while 'the apex beat was visible and palpable in the 7th left intercostal space near the anterior axillary line. Tactile fremitus was increased and percussion note impaired on left side of the chest though on the contrary the latter was hyperresonant on the right side till the upper level of liver dullness at 8th rib, On auscultation there was vesicular breathing on the right side of the chest and bronchovesicular on the left side of the upper chest on the back. Bronchial breathing and bronchophony was heard on the lower chest and the back. There were no adventitious sounds of any type. No abnormality was detected in the other systems.

Discussion

The affected lung is usually normal or subnormal in size, There is panacinar emphysema but there is evidence that the number of alveoli is less than normal. It is thought that the causal condition must occur between birth and the age of 8 when the alveolar numbers normally reach the adult figure. There is usually an evidence of patchy obstruction and obliteration of the bronchioles and small bronchi but sometimes of larger bronchi too.

Functional Abnormality

There is usually evidence of airways obstruction and an increase in RV.

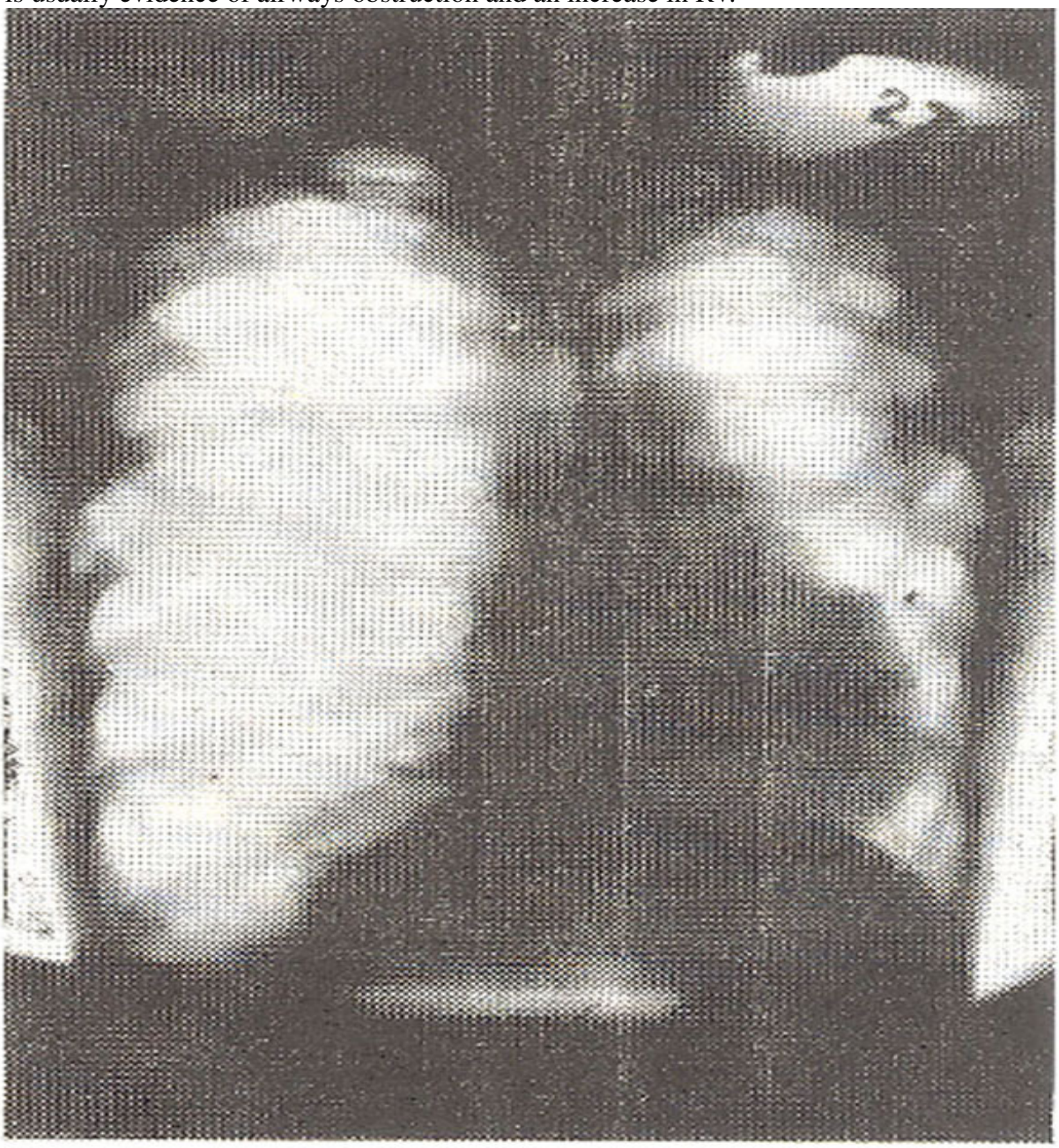

Fig. 1: X-ray chest P.A. View. Increased radiolucency of right lung with low dome of diophragm, trachea and mediastinum shifted towards left side, left dome of diaphragm is raised, linear thickening of pleaura over fibrosed and shrunken left lung.

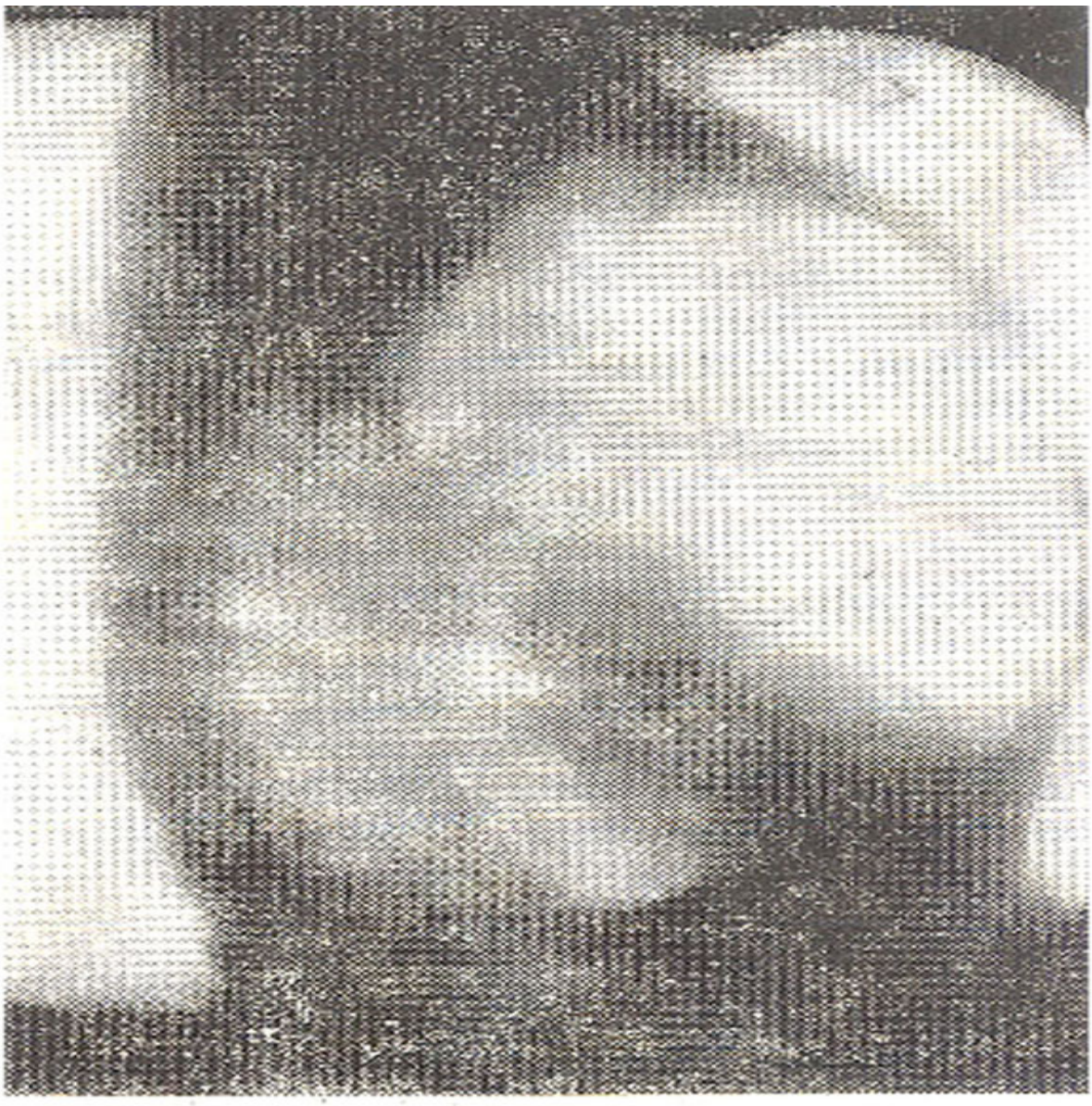

Fig. 2: X-ray chest (R) lateral view.
Marked sternal prominance with enlarged retro-sternal Zone of increased translucency.
Vitalography showed.
FEV=1600 ml, FVC=2800 ml
FEV/FVC ratio=55%
(Forced expiratory time) FET=6 seconds
Blood, sputum and other relevant investigations revealed nothing abnomal.

The figures may be intermediate between those of normal people and those of patients of obvious disease,

Clinical Features

Many patients are unable to recall a childhood incident which might have been responsible for the

condition but unilateral emphysema has been shown to develop, in patients with previous normal radiographs, after primary tuberculosis or measles. It seems, likely that other forms of bronchiolitis in infancy may also be responsible. Most patients are often quite free from symptoms. In older patients there may be accompanying chronic bronchitis. Exertional dyspneoa is the main complaint in an established case.

X-ray of the chest shows unilateral increased radiolucency with decrease in the shadows of the blood vessels both at the hilum and in the lung. The mediastinum may be deviated to the affected side. The diaphargm may be in normal position or low,

This condition may be differentiated from unilaternal changes in soft tissue cover such as paralysed muscles, congenital absence of pectoral muscles or mastectomy may give an appearance of unilateral hypcrtransradiancy by examining the patient. In compensatory emphysema the collapsed lobe can usually be visualized and the vessels in the emphysematous lobe are fanned out.

Prognosis and Treatment

In most of the patients there is adequate respiratory reserve in the normal lung. The patient is, of' course, at increased risk and pneumonia in the unaffected lung will be more serious than in a normal person. There is no specific treatment and bronchodilators and corticosteroids are ineffective. Respiratory infections should be treated promptly with appropriate antibiotics. The patient must be persuaded to stop smoking. Patients with othe respiratory diseases obviously suffer by having a decreased respiratory reserve leading to ventilatory failure and sometimes right venticular failure. Occasionally resection is indicated in repeated secondary infection and bronchiectasis in the effected lobe or lung.

Follow-Up

The patient is alive and well. He requires occasional inhalation of Salbutomol and is able to work on a part time basis as a tailor. In winter he tends to get respiratory infection for which he is given antibiotics with bronchodilators and corticostevoids for a short period.

Acknowledgement

I gratefully aknowledge the interest, of Dr. Shaukat Mahmud Malik, Cardiologist, Central Government Poly Clinic, Islamabad iii reviewing this case.

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