

PSEUDO-TUBERCULOSIS OF THE LUNGS WITH EOSINOPHILIA: CONTRIBUTION TO TREATMENT

By RUDOLF TREU, M.D., L.R.C.P.

Calcutta

In October 1940 Frimodt-Möller and Barton reported in this Journal on a large number of patients who had been admitted for sanatorium treatment under the mistaken diagnosis of tuberculosis and who were suffering from infiltrative processes in the lungs accompanied by fever, cough and expectoration which was free of tubercle bacilli. The number of these cases was very large and the authors described the condition as essentially benign but chronic, since a check-up of some patients several years afterwards still showed no change of the x-ray and blood-picture.

As to the aetiology of the condition, the authors have not been able to come to any definite conclusion. They believe the origin to be possibly allergic, but admit that quite conceivably many more causes may have to be considered. Syphilis or protozoal infections could be excluded as aetiological factors.

From the extensive survey of Frimodt-Möller and Barton, it is quite apparent that the condition of 'eosinophile lung' is regarded by them as a chronic one not amenable to any specific treatment. In their paper they do not mention any therapeutic measures beyond the routine sanatorium treatment.

Apparently 'eosinophile lung' is a much more common condition in the South of India than in Bengal. During the past years, I have very rarely had occasion to observe lung manifestations as described by Frimodt-Möller and Barton and then only from a radiological point of view without a chance of following them up. I therefore think it may be of interest to report on two cases which were long enough under my observation to make it certain that the condition cleared up in a comparatively short time under treatment. The first case I consider to be of special interest as he appears to be the first European affected by this disease and described in the literature.

Case 1.—The patient, a male European, aged 41 years (the age is of some interest too; the disease commonly appears to affect much younger age groups), consulted me for the first time on 24th June, 1941. For 6 to 8 weeks he had been suffering from cough, which was particularly troublesome at night, his temperature was above normal and had been quite often 101 and even higher; he felt quite weak and unable to continue his work; and he had lost at least 1½ stone in weight. He suggested himself that he might be suffering from tuberculosis as all his symptoms seemed to point to this diagnosis.

Clinical examination of the lungs showed no zones of dullness on percussion, and on auscultation the breathing appeared over both lungs slightly bronchovesicular with lengthened expiration with many musical rhonchi over both lungs, somewhat reminiscent of asthma bronchitis.

A skiagram taken on the same day showed very extensive mottling over both lungs, fairly evenly dis-

tributed, and intense striation, also without any pre-selection. In fact, the picture somewhat resembled one of extensive silicosis except for the shadows being less dense than in a silicotic lung. But obviously the picture differed vastly from that of a tuberculous infection (figure 1).

The sedimentation time (Linzenmeier) was 24 minutes.

Blood count: hæmoglobin 90 per cent, red cells 4.78×10^6 , WBC—23,400, differential count: neutrophils 21 per cent, lymphocytes 40 per cent, monocytes 3 per cent, eosinophils 62 per cent. Repeated examinations of the sputum showed no acid-fast bacilli, Wassermann and Kahn tests were negative. In the stool motile *Giardia lamblia* were found, but otherwise the stool showed no evidence of inflammatory changes of the colon.

The patient was advised to take rest and treatment was instituted with 30 grains of potassium iodide daily and injections of 'pulmochin'. Up to the 8th of July nine such injections were given, but there was no noticeable effect. The temperature was as high as before, cough and expectoration remained unchanged.

On 8th July the patient was also seen by Dr. A. C. Ukil who confirmed the diagnosis and who also confirmed that he had not yet seen this disease in a European. The treatment with potassium iodide having been without result, it was decided to try arsenic and I chose acetylarsan. The patient received 1 c.cm. on 10th July, 2 c.cm. on 12th July, 3 c.cm. on 14th July, and from then onwards every third or fourth day 3 c.cm. intramuscularly, altogether 13 times. On 17th July another skiagram was taken which did not differ materially from the first skiagram (figures 2 and 2a), but the eosinophilia had fallen to 53 per cent. From the 17th of July the fever stopped and the patient felt better from day to day. The cough and expectoration disappeared and within three weeks he put on four pounds in weight while during the preceding three weeks he had lost a further three pounds in spite of complete rest. From the end of July examination of the lungs no longer showed anything abnormal, the sedimentation test on the 6th of August showed the remarkable improvement from 24 minutes to two hours.

Blood examination on 25th August, 1941, showed leucocytes 6,250, and only 8% eosinophil cells, and the skiagram on 27th August showed that the condition had cleared up to such an extent that the skiagram could only be described as normal (figure 3).

At the beginning of September the patient went for a long leave to South Africa where he consulted several tuberculosis specialists who found his lungs perfectly normal. He was apparently the first case of this type they had come across, this affection being unknown in South Africa. On examination after his return to India on 10th June, 1942, he had regained his old weight, felt and still feels perfectly fit, a skiagram of his lungs shows no pathological changes whatsoever, and his eosinophil cells were 4 per cent.

Case 2.—This patient, a 45-year-old Goanese, consulted me first on 18th October, 1941, with a history of an old tuberculosis of the lungs in 1926. Now he had been ill again for two months, coughing heavily, there was a great deal of expectoration and his temperature rose daily to 100 and even 102°F. He had lost about one stone in weight and felt unable to carry on his duties as clerk. On clinical examination, there was some dullness over his right apex, the breathing sounds over both lungs were bronchovesicular, and scattered over both lungs were numerous musical rhonchi. The clinical picture was that of a subacute febrile bronchitis, but not of active tuberculosis. There were no tubercle bacilli in his sputum, his sedimentation time was 80 minutes (Linzenmeier). Radiologically he showed evidence of an old fibrotic tuberculosis of the right apex and the upper parts of the right lung and a well-marked increase of the broncho-vascular markings as would be expected in such a condition (figure 4). He did not show radiologically the changes of case 1. Treatment directed against this subacute bronchitis with inhalations, calcium injections, application of liniment, etc.,

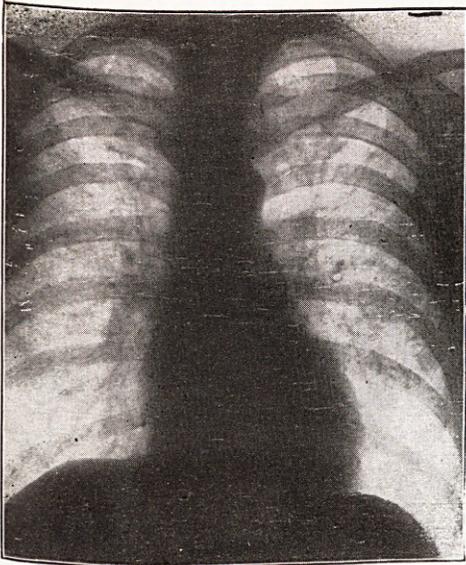


Fig. 1.

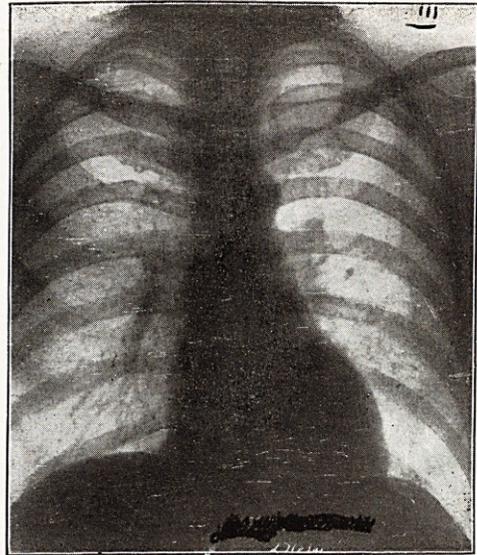


Fig. 3.

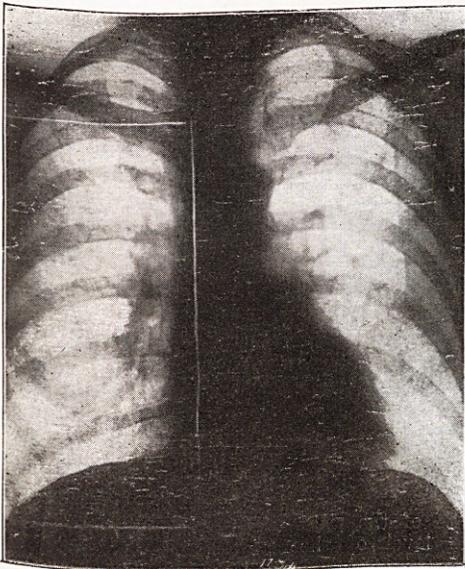


Fig. 2.

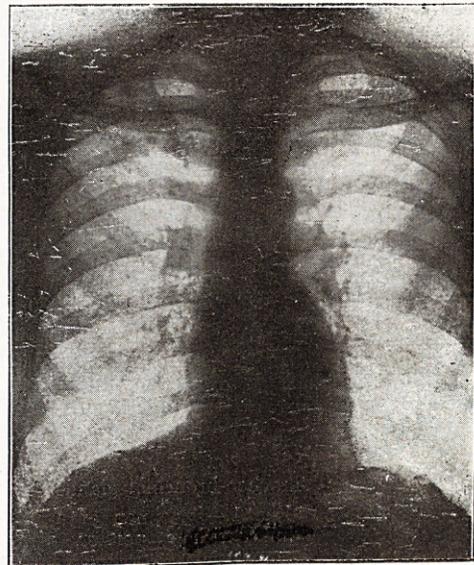


Fig. 4.

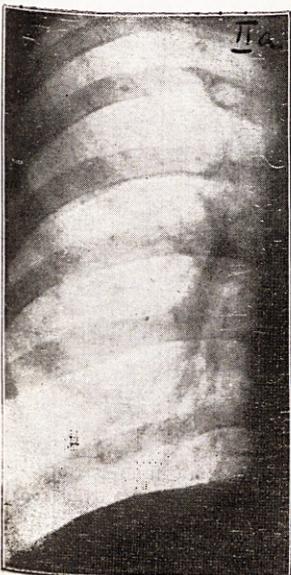


Fig. 2a.

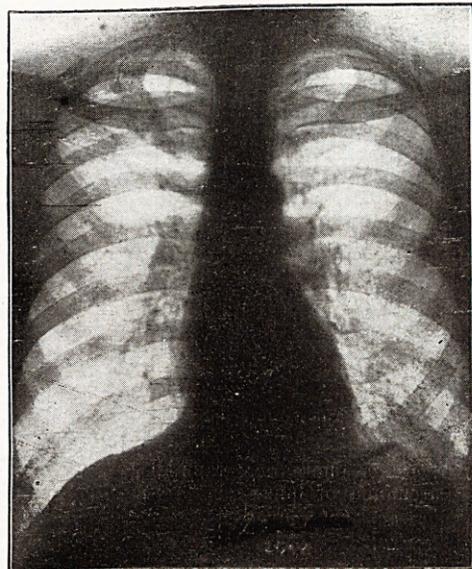


Fig. 5.

remained entirely unsuccessful, and therefore on 8th November, I considered the possibility that his condition might be better explained by an eosinophile pseudo-tuberculosis. His total leucocyte count was 38,600, the differential count was 19 per cent neutrophils, 8 per cent lymphocytes, 72 per cent eosinophiles, 1 per cent monocyte. On the same day treatment was begun with 2 c.cm. acetylsarsan, followed by 3 c.cm. on 14th and 17th November.

On the evening of the 18th November the patient whose temperature had been normal during the last three days developed high fever. His temperature went up to 105°, and on the next day there were signs of a lobar-pneumonia of the left lower lobe. He was treated with sulphapyridine and was free of fever from 22nd November. Blood examination on 25th November showed an eosinophilia of only 13 per cent and the temperature never rose again. His cough and expectoration disappeared entirely after this attack of pneumonia. His blood examination on 25th November showed leucocytes 9,400, with 13 per cent eosinophile cells. Skiagram taken on 25th November showed the remnants of the pneumonic process of the left lower lobe (figure 5) and strong adhesions of the medial part of his left diaphragm which had disappeared when again examined radiologically on 25th December.

The patient was seen again on 14th June, 1942, after his return from Goa where he had been on holiday since the end of December 1941. Cough and expectoration had been absent since he left Calcutta, his lungs were clinically free of bronchitis, his blood picture had returned to normal, eosinophile cells were 4 per cent.

These two cases have a number of features in common: the longstanding cough with a great deal of expectoration, fever, loss of weight. But, while in case 1 the radiological appearance of the lungs led at once to the correct diagnosis, it was some time before case 2 was properly recognized. The skiagram in case 2 showing an old tuberculosis together with the history of a tuberculous affection of the lungs many years ago seemed to explain all the symptoms well enough, until the examination of the blood proved the actual nature of the disease. And in case 2, although clinically in no way different from case 1, there was no evidence of any changes of the lung-parenchyma beyond those expected in any case of longstanding bronchitis.*

Unfortunately, an intercurrent pneumonia interfered with the treatment by acetylsarsan which had given such convincing results in case 1. But this pneumonia also brought the disease to an end as all symptoms and signs of the disease disappeared from the time the pneumonia healed. It is not difficult to assume that the pneumonia in 'eosinophile lung' acted as a severe protein-shock therapy and, since apparently very little is known about any successful treatment of this condition, this fact might encourage others to try some of the well-recognized methods of unspecific shock-therapy in similar cases.

Although I am well aware that one single case proves very little, the success of acetylsarsan in case 1 was so immediate and convincing that I feel that case 1 alone is worthy of record for this reason alone. This one observation, it may

(Concluded at foot of next column)

* It is difficult to see how the diagnosis in this case is justified; 'idiopathic' eosinophilia is very common in this country.—EDITOR, I. M. G.

CATARACT IN UNTREATED CASES OF DIABETES MELLITUS

By M. A. SHAH, M.B., B.S., P.C.M.S.

Medical Officer-in-charge, Eye Out-patients Department, Mayo Hospital, Lahore

ALTHOUGH in 1778 Rollo (Duke-Elder, 1941) mentioned that patients suffering from diabetes were especially prone to get cataract, a systematic description of the condition did not appear till 1834 when Berndt published his description (Kirby, 1933).

Two types of cataract have been defined clearly in our times by Duke-Elder (*loc. cit.*) but it must be pointed out that references to these types are not wanting in the writings of earlier authors, especially in those of Beard in the middle of the last century. The types are:—

1. Senile cataract coming on in diabetes.
2. A true diabetic cataract, which is very rare.

Senile cataract in diabetic patients.—The changes in the lens are mainly the same as those occurring in senile cataract in old people. There are, however, some differences in the incidence, the time of appearance, and the rate of progress of these lenticular opacities.

In order to obtain some idea of cataract occurring in untreated diabetic patients in the Punjab, a series of 36 patients suffering from diabetes mellitus was examined in the eye out-patients department of the Mayo Hospital, Lahore. None of the patients examined had ever had any treatment for their diabetes; this fact was due mainly to ignorance or to economic reasons. The duration of the disease was recorded as far as was known to the patients. The urine was examined for sugar, but the blood sugar during fasting could not be estimated, in view of the limited scope of the present investigation. The cases of diabetes were divided into 5 classes:—

1. Very mild when sugar was present in traces.
2. Mild when it was $\frac{1}{2}$ to 1 per cent.
3. Moderate, 1 to 2 per cent.

(Continued from previous column)

be hoped, will encourage others to try acetylsarsan in similar cases and it may open the way to a remarkable shortening of this otherwise essentially chronic disease.

Summary

Two cases of clinically almost identical but radiologically quite different forms of pseudo-tuberculosis of the lungs with eosinophilia are described.

The first case showed the typical radiological appearance of mottling of the lungs, while the second case showed no typical evidence of this disease but showed evidence of old fibrotic tuberculosis.

The first case was successfully treated with acetylsarsan, the second case healed after an intercurrent lobar-pneumonia which began after only three acetylsarsan injections had been given.