

Correspondence

Detection of Tuberculosis

SIR.—Dr. G. Jessel's comprehensive letter on the above subject (April 11, p. 477) makes reference to the manifesto of the N.A.P.T., and some points in his criticism require a reply.

1. This manifesto was intended chiefly for those interested in tuberculosis but without a professional and intimate knowledge. Editorial space nowadays is limited, and statements had to be brief and more curtailed than would have been the case in a memorandum intended solely for doctors. Nevertheless, we do not think there is any inaccuracy in the manifesto, and it has elicited a very large volume of interest and correspondence from doctors, councillors, local authorities, trade union officials, and others throughout the country.

2. It would be generally agreed that active pulmonary tuberculosis will be found almost invariably associated with some form of constitutional disturbance, if the clinician can have his patient under continuous observation. But that is very different from saying that these very early changes always give warning to the patient. Every day we see tragedies where the symptoms are so slight or transient that they are mistaken or ignored.

3. We have not claimed that x-ray examination of the chest alone must infallibly detect pulmonary tuberculosis, nor do we think that mass radiography *per se* is a final solution to the problem of early diagnosis. But a miniature photograph should lead in all doubtful cases to a more complete examination with a larger film, and this should go hand in hand with a full clinical overhaul. Radiology of healthy people should be a signpost leading us to more intensive methods in those who require it.

4. We regard re-examination at regular intervals and careful comparison of the films as highly important. Once again, this will not achieve results unless it goes with a careful clinical examination, but we would not accept mere observation or study of body weight as conclusive, as Dr. Jessel seems to suggest.

5. Most of us would agree with Dr. Jessel that further research is necessary not only to determine the type of apparatus best suited for this work but also to classify further the types of early lesion which present no symptoms and constitute a very important section of the potential tuberculous population.

We regard the wise extension of the use of x rays as the most modern and effective method of advance in finding pulmonary tuberculosis at an early and curable stage, but x rays, of course, do not replace other clinical and administrative methods. The volume of letters the National Association for the Prevention of Tuberculosis has received from all parts of the country shows that many laymen are vitally interested in the whole matter, and have penetrated to the centre of the problem more deeply than some medical men. In a disease like pulmonary tuberculosis, which is increasing under war conditions, we cannot afford to be complacent. The main intention of the manifesto was educational, and the results suggest that it is achieving our aim.—We are, etc.,

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R. A. YOUNG.

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SIR.—The correspondence and writings on this subject seem inexhaustible. Doubtless there are many aspects of the matter, and many points of view, but surely the things of fundamental importance are, first, to detect active pulmonary tuberculosis, and, secondly, to prevent its spread. The continued survival of the individual consumptive is not so much a matter of concern to a nation struggling for its existence, but to prevent this individual becoming a centre of infection to many others is of the utmost concern. It may be, and probably, alas! will be, impossible to find institutional accommodation for every case of pulmonary tuberculosis already diagnosed or disclosed by careful examination of the community, but it will be possible to remove an individual coughing out millions of bacilli in droplets from the crowded conditions of the submarine, the destroyer, the Army hut, the workshop, the shelter, and, as regards the home, careful instructions could be given, for I would deprecate ruthless segregation.

Though more difficult than the prevention of the spread of typhoid, tuberculosis is nevertheless a bacterial infection which, when recognized, can be put under some measure of control. This can be done very largely by education. Miniature radiography may have defects, but it is better than nothing; no diagnosis should be made on the miniature radiograph, but doubtful cases should be further investigated. The chief, and perhaps the only, necessary investigation is the examination of the sputum. If this is not positive, then the individual is not infectious to others, and this at the moment is the most important issue. The time has come when everyone with a persistent cough and sputum should have a bacteriological examination of the sputum. The need for practical measures is urgent. I should have thought that all minor divergences of opinion could be submerged into the greater issues, and that there could be no question but that mass radiography should be employed, and bacteriological examination of the sputum made in every suspicious case, the suspicion being aroused by the symptoms above mentioned.—I am, etc.,

London, N.W.1.

F. G. CHANDLER.

SIR.—The discussion on the detection of early pulmonary tuberculosis is becoming somewhat lengthy, and a good many references are being made to the fact that the condition is frequently symptomless in the earlier stages, which, unfortunately, are precisely the stages at which the condition is most likely to be amenable to treatment. I am glad to note that Dr. Jessel calls attention (April 11, p. 477) to the fallacy of this attitude. In a paper published nearly five years ago (*Lancet*, 1937, 1, 186) I analysed a group of 340 patients in whom the diagnosis of pulmonary tuberculosis had been made. It was found that the average duration of symptoms which preceded the diagnosis was 1.08 years.

The explanation of this misconception of the early symptomatology of pulmonary tuberculosis lies in the fact that the early symptoms are often not referable to the respiratory tract. They are, in fact, common to a great variety of diseases which produce "toxaemia." Undue fatigue, dyspepsia, anaemia, may precede the more conclusive symptoms by many months. Any vague complaint of this sort should be regarded as extremely suggestive, and the possibility of tuberculous infection should always be kept in mind whenever a patient appears to be out of health, even although there may be nothing to suggest the presence of disease in the respiratory tract.—I am, etc.,

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JAMES MAXWELL.

Mass Radiography

SIR.—With reference to recent letters in your correspondence columns about mass radiography in the campaign against tuberculosis, I feel that one apparent limitation of this method cannot be too strongly emphasized. I think it is the consensus of opinion that chronic active pulmonary tuberculosis is not commonly a disease which comes on over a period of years and gradually increases, but usually comes on over a matter of months, and appears to extend in waves of activity separated by periods of relative quiescence. These waves occur at shorter or longer intervals.

In examination of tuberculous contacts it frequently happens that repeated x-ray examination of the chest shows no active disease, yet that same contact at a later date, after becoming less careful about regular attendance, reappears with symptoms. X-ray examination, then, may show quite extensive active disease in the lungs.

Any mass radiographic survey of a section of the population sufficiently large would in all probability keep showing fresh cases of minimal active tuberculosis if repeated, say, every three months. One survey would thus bring to light many cases which would undoubtedly benefit from their early diagnosis, but for this to be of great value to the general population surveys would have to be repeated at such short intervals that the method would be impracticable. Mass radiography of children leaving school would appear, in view of their age group and the comparative rarity of active pulmonary tubercle at that age, to be without value in public health. It will thus be seen that much work remains to be done before the values and limitations of this method can be assessed, and before it can be confidently advocated as a routine public health measure.—I am, etc.,

Trowbridge.

JOHN S. HARPER.