Stethoscope versus X Rays

SIR,—With reference to the correspondence "Stethoscope *versus X* Rays," which has been pursued so vigorously in your *Journal*, I should like to point out that, in my opinion, the whole controversy is based upon a logical error, for if, on the one hand, the *x*-ray picture is taken as a faithful representation of structural lesions which we seek to recognize by clinical methods, then this picture must be accepted as the final criterion of truth, with the result that the physical signs (or clinical manifestations) must necessarily be misleading in a certain percentage of cases. If, on the other hand, the physical signs (or clinical manifestations) are taken as the faithful representation of the structural lesions, then they must be considered as the final truth, with the result that the *x*-ray picture must necessarily be misleading in a certain percentage of cases.

Since, as already mentioned, it is by clinical methods that we endeavour to detect structural lesions—i.e., lesions which, generally speaking, can be strictly defined only by anatomical methods—the diagnosis of these lesions by other than anatomical methods must be based on the correlation of clinical data with anatomical data. Since there has not yet been any reliable statistical work done on the correlation of physical signs (or clinical manifestations) with lesions, or of *x*-ray pictures with these lesions, it is impossible at present to decide which method gives more accurate results.

This correspondence is symptomatic of the confusion of thought which pervades the whole structure of medicine, and bears witness to the need for a revision of its fundamentals, which in turn would be bound to have a profound influence upon the present medical scheme.—I am, etc.,

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SIR,—Dr. F. Kellermann's second letter (Feb. 2) so grossly misrepresents the real issue, and is so contemptuous in its tone, that I crave your indulgence for a few words of remonstrance. No competent clinician would dream of using the stethoscope to the exclusion of all other clinical evidence, nor is it conceivable that this was in the minds of members of the Royal Society of Medicine at their much-discussed debate on Nov. 27 last. As Dr. R. C. Hutchinson said in his letter (Jan. 5), which started this discussion: "Most of the speakers obviously felt the limitations of the title ["Stethoscope *v. X* Rays"] and included in their remarks the full range of physical examination. Several appear to be thinking in terms of early tuberculosis, in which no one would dispute the pre-eminent value of radiology." Dr. Kellermann says that the subject of the debate "can be summarized in two questions with two simple answers." Let us take each question and answer in turn:

"*Question 1.*—What evidence of pulmonary disease can be detected by auscultation which could not be detected by *x* rays? *Answer.*—Rhonchi and pleural friction-rub." No sound clinician would take "rhonchi" and "pleural friction-rub" as specially distinctive of pulmonary tuberculosis (which is the disease more particularly in question). Does then Dr. Kellermann mean to imply that the other and more distinctive signs, such as crepitations, rales, post-tussive crepitations (so often missed because the examiner will not take the trouble to get the patient to cough), prolonged expiratory breath-sounds, increased vocal resonance, etc., are never found without *x*-ray evidence being also always obtained? If so, there are numerous cases—as this discussion has brought out—which disprove such a contention. Further, to depart from tuberculous disease only, auscultation can give evidence of bronchiectasis, where *x*-ray evidence may be negative.

"*Question 2.*—What evidence of pulmonary disease can be detected by *x* rays which could not be detected by auscultation? *Answer.*—Innumerable." This is bad English, but, letting that pass, would many radiologists and clinicians admit the "innumerable"? This illustrates very well one of the remarks made by Dr. C. A. Birch at the debate: "Instruments passed through three stages: extravagant claims, severe criticism, general use until ousted by a better method." If "the stethoscope was now in the third stage" he might equally well have added: "The *x* rays are now in the first stage"; i.e., that of extravagant claims. One radiologist of distinction would not agree with the claims made by Dr. Kellermann (see letter from Dr. J. F. Brailsford, March 2), but perhaps in Dr. Kellermann's estimation Dr. Brailsford, although he speaks as a radiologist, is included among those whom Dr. Kellermann contemptuously likens to "a fifth-rate provincial soccer club."

It seems impossible to make Dr. Kellermann understand that those who believe that the stethoscope still has a useful place do *not* undervalue the importance of *x* rays. Here is the real essence of the misunderstanding. No good tuberculosis officer to-day would fail to make use of *x* rays because auscultation gave no evidence, and one would have thought that no competent teacher would allow medical students to suppose that because auscultation was negative, therefore—in a suspicious case—*x*-ray examination was unnecessary, any more than he would teach that a negative sputum examination meant that tuberculosis was not present. Dr. James Maxwell, Dr. Peter Kerley, and Dr. Geoffrey Marshall must feel grateful to Dr. Kellermann for his support, but in invoking their authority let not the unwary be led to infer that the stethoscope is an obsolete instrument. This is by no means the case. In the report of the debate (*Journal*, Dec. 15, 1945, p. 856) we read: "Dr. Peter Kerley said that the rash statement was made from time to time that the stethoscope was obsolete: no experienced radiologist would agree with that." Dr. James Maxwell, in a reply to Dr. Hutchinson, says: "Nobody would deny that physical examination has its place, but the time has come when physical examination and radiography must be brought together, and teaching must be based upon the intelligent combination of all methods of examination," which would include auscultation. This is a very different attitude from that of Dr. Kellermann.

In short, to quote Dr. Kellermann, "Don't let us confuse the issue," as he himself has done. The question at issue is simply this: Is the stethoscope still useful in cases of suspected lung disease, or is it to be discarded as superfluous, because *x* rays (as in Dr. Kellermann's view) will give all the information required. His gibes at those who believe the stethoscope to be still useful come with an ill grace from one who is a comparatively recent recruit to the ranks of public health tuberculosis workers. The writer of the letter which initiated the discussion was some years ago medical superintendent at one of our foremost sanatoria (to which, by the way, I believe Dr. Geoffrey Marshall holds the appointment of physician); Dr. Brailsford is a well-known radiologist; and both of these, as well as others who have taken part in this discussion, may well be supposed to have had a very much greater experience of both the clinical and the radiological side of pulmonary tuberculosis diagnosis.—I am, etc.,

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Penicillin and Pursers

SIR,—Although I entirely agree with Dr. O. P. Clark (March 16, p. 408) that penicillin might well be released in small quantities for general use so that experienced practitioners could use it with advantage in obviously suitable cases, I have perhaps misled him by over-condensing my article about surgery at sea (Feb. 16, p. 244).

The pursers aboard American Liberty and Victory ships, after receiving an intensive course of instruction in advanced first-aid treatment, take an examination which qualifies them as a pharmacist's mate. This peculiar status entitles them to the freedom of the ship's medicine chest, which will always contain adequate quantities of sulphathiazole and sulphadiazine. These drugs are kept almost exclusively for the treatment of gonorrhoea as described in my article. In this and other febrile conditions the exact indications for the use of sulpha drugs and their dosage are laid down in a special handbook, and a purser who tried experiments on his own would probably lose his licence. A further licence is required to give penicillin, and I believe that its use is restricted to the treatment of simple gonorrhoea as described. As there are nearly always some victims of what the poet once called "love's tourney" on board, this complaint rather dominates the mental horizon, and it is news to the average purser that penicillin can be a life-saver in acute appendicitis. He would certainly never give it empirically without definite instructions from a rescue ship or visiting doctor, and I have always been required to put my instructions for its use in writing.

Of course the whole scheme derives from the astoundingly rapid development of the American Merchant Navy, and is only justified by the absence of available doctors and by so many emergency cases. In practice it seems to be yielding good results, and the discipline and common sense of the average seaman are well reflected in his careful use of these powerful