APPROACH TO PNEUMONIA

BY

Major JOHN MACKAY-DICK, M.B.Edin., F.R.C.P.E.
Royal Army Medical Corps
Officer-in-Charge Medical Division of a Military Hospital

In the Services almost all cases of pneumonia, and indeed most cases of upper respiratory tract infection, certainly those occurring in unmarried other ranks, are treated in hospital or M.R.S. As a result the Service physician, with all diagnostic aids at hand or reasonably available, is provided with a golden opportunity of diagnosing, in so far as modern diagnosis lends itself, differentiating and treating the different types of pneumonia the presence of which, it must be admitted, is not infrequently initially indicated by the radiologist when a routine skiagram of the chest has been requested just to exclude involvement of the lung parenchyma. It is safe to say that numerous cases of pneumonia are so mild that in civil life, at least, many of these cases pass unnoticed; the individual scarcely taking to his bed and treated as a "severe cold" or influenza which has "held on" and "dragged the patient down a bit."

The frequent use of skiagrams of the chest these days—a practice scorned by the not-so-old physicians of 10 to 15 years ago—has revealed a greater incidence of pneumonia than would have been diagnosed otherwise. I say this in all humility and without the slightest disrespect to our greatly revered teachers who taught that the main use of skiagrams of the chest was to confirm the physical signs elicited on clinical examination. I believe that it is as commendable to elicit obvious physical signs as it is to walk through Hamburg, which is said to have been 70 per cent destroyed by bombing, and say that a large part of Hamburg is in ruins.

Stress should be laid on the recognition of early, and therefore minimal, signs of disease and not, as is frequently the case, on the obvious visible, palpable or radiological signs which are unmistakable.

What is pneumonia? It is defined simply as "Inflammation of the lungs." Pneumonitis is defined similarly while acute lobar pneumonia is defined as "Inflammation of one or more lobes of the lung." It is unfortunate that pneumonia to many would appear to mean an acute disease of the lung parenchyma which either responds to sulphonamide/penicillin or it does not. If it does not respond to such treatment and the total white blood count is below 10,000 to 12,000 c.mm. then it is frequently regarded as a "virus" pneumonia. Such a diagnosis is frequently made with a knowing look and there the
matter ends. This approach to pneumonia is common and not just amongst recent graduates. No determined search is made for the etiological agent no matter the response to empirical therapy. Nature is allowed to take its course and not just amongst recent graduates. No determined search is insinuate for the etiological agent no matter the response to empirical therapy. Nature is allowed to take its course and so cases of enteric group fever, typhus fever, primary atypical pneumonia, "Q" fever, canicola fever, Weil's disease, influenza, psittacosis, etc., are recorded as "Virus" pneumonia or sulphonamide/penicillin resistant pneumonia when streptomycin might have effected a rapid response to therapy in leptospirosis; or aureomycin in various other diseases characterized by pneumonia.

Care must be taken to avoid, overlooking pulmonary tuberculosis in cases regarded as primary atypical pneumonia or as "Virus" pneumonia. A Mantoux test is of value in some cases. The sputum or gastric washings should also be searched for acid and alcohol fast bacilli which should be identified on culture and animal inoculation. In some such cases repeated skiagrams of the chest at judicious intervals, T.P.R., weight and E.S.R. records, as well as tomogram, may be indicated. Furthermore, unresolved pneumonia should always be regarded as possibly due to cancer and in every case in the forties it should be regarded as such until the contrary is proved. In addition, bronchiectasis should not be forgotten in repeated attacks of pneumonia. Cancer should also be excluded in all cases of lung abscess in which it is believed to be present in one-third of cases over the age of 45 years.

It is a pity that the approach to cases of pneumonia is so narrow as regards investigation and differentiation of types. On making a remark that effect I am amazed at the frequency of the reply "why worry about the cause as long as the condition clears up with or without empirical therapy and the patient gets better?" This attitude is more frequent than it should be. It is to be deprecated and discouraged. It shows lack of the enquiring mind. Pneumonic signs may vary from fine crepitations—the "Pneumonitis" of some—to the full-blown classical signs of consolidation which include bronchophony and tubular breathing. These signs should merely mean involvement of the lung parenchyma and be regarded as a rough guide to the morbid processes taking place. Such signs should be tantamount to a demand for a thorough clinical, radiological and laboratory investigation. Pneumonia may be due to superadded infection in cases of typhus fever, etc., but I have seen cases where only the pneumonic signs attracted attention and capable physicians diagnosed typhus fever as lobar pneumonia. For typhus fever may be read enteric group fever, M.T. malaria, relapsing fever, hepatic amoebiasis, pulmonary neoplasm, "Q" fever, leptospirosis, etc. etc. (see official Nomenclature of Diseases, Seventh Edition, 1948).

At this point I should like to make a plea that the term "Primary Atypical Pneumonia" should be discarded. In 80 per cent of cases of this disease it is said that cold agglutinins are present in the blood. What is typical pneumonia? What is atypical pneumonia? What is primary atypical pneumonia? A monstrous abortion, I should say.

The usual routine in cases of pneumonia in hospital is as follows. T.R.P.
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are taken on admission, and in addition to the routine clinical examination the following investigations are carried out:

(a) Total and differential white blood cell count.

(b) Sputum, where present, is tested for a predominant organism which is tested for sulphonamide penicillin sensitivity.

(c) Initial radiological examination of the chest is carried out as soon as practicable or indicated. Later in convalescence clearance skiagrams of the chest are always carried out.

Sulphonamides with or without penicillin are normally exhibited empirically as they must be at this stage. If the patient is found to be suffering from a recognized bacterial pneumonia which is sulphonamide/penicillin sensitive and responds in the anticipated manner, no more investigations are carried out, provided the patient makes an uninterrupted recovery. Of course in the Tropics or in any malarial district, and that may be South East England, blood films and thick drops are examined in every case for evidence of malarial parasites. If the patient is still considered to be suffering from a bacterial pneumonia and does not appear to be responding to treatment, then we consider:

1. that the organism may be sulphonamide/penicillin resistant, as the laboratory test should confirm,

2. a recognized complication has arisen, e.g. pleurisy with or without effusion, empyema, lung abscess, pericarditis, etc.

3. some other disease process is present, and in the Tropics among the numerous diseases that leap readily to mind are two in particular—arch enemies of all physicians and surgeons—namely malaria and hepatic amoebiasis.

When the sputum shows no predominant organism and pyrexia persists a palpable spleen and the appearance of a rash would call for blood culture, if this has not already been carried out and repeated, and the institution of serological reactions, e.g. Weil Felix reaction, Widal reaction in those not protected by T.A.B., etc. etc. Although in all vague cases we carry out serological tests to exclude primary atypical pneumonia, (“Q”) fever, infective mononucleosis, leptospirosis, influenza and possibly psittacosis in the appropriate case. A point well worth remembering is that the Weil Felix reaction may not become positive until well into the convalescence in a case of typhus fever. The serological reactions in other diseases, including canicola fever and Weil’s disease, can behave in similar manner. It must not be forgotten that by no means all cases of typhus fever develop a rash, and so any case with pneumonia and splenomegaly must be investigated as a possible case of septicaemia, subacute bacterial endocarditis, typhus fever, malaria, etc. etc.

It will be seen therefore that all relevant investigations are carried out in all cases with pneumonic signs in the chest until the ætiological agent is demonstrated, or the type demonstrated serologically, or by a process of exclusion, e.g. the virus group of indeterminate origin.