

and is sometimes absent. The most constant and reliable symptom at the outset is the elevation of temperature, usually ranging from  $102^{\circ}$  to  $103^{\circ}$ . The temperature should be taken in the rectum, as the axillary and buccal temperatures show inaccuracies and fluctuations in the aged. Later the temperature may reach  $104^{\circ}$  to  $105^{\circ}$ , or even higher. The pulse, owing to the frequency of arterial changes, is unreliable; acceleration is the cause of suspicion, but trustworthy information can best be obtained by cardiac auscultation. The respirations are not relatively increased, as in adults. Sometimes they are of a puffing or panting character. Dyspnoea and catating respiration is not particularly noticeable unless the apex is affected. The respirations rarely pass twenty-five or thirty per minute. Any effort in breathing, combined with raising of the shoulder, should lead to an examination. Cough may be slight or wanting. The cough and dyspnoea of chronic bronchitis or asthma sometimes subside during an attack of pneumonia. The characteristic sputum is rarely present. It is oftenest thin, lacking in cell elements, and, when due to coexisting oedema, watery. My experience is in accord with the authorities who state that the expectoration never becomes purulent in the stage of resolution. The absence of pleurisy as a complication is most notable, and in the large proportion of cases there is no complaint of pain. The countenance affords valuable information in the way of expression and change of color, and the mental faculties are almost always perturbed in febrile disturbances of old age. The course and duration of the disease differ from those of middle life in that the completion of the earlier stages is sooner accomplished and the stage of resolution more protracted. Recovery, when it occurs, is generally marked by a somewhat lengthened crisis; and the critical diarrhoea continuing through the lysis is more common than a critical sweat.

The inexperienced physician finds that physical examination of the chest of the aged is a new problem. Senile changes in the lungs and chest wall modify sounds, and practice alone can make one familiar with their altered character. At first there is a tendency to arrive at erroneous conclusions, aside from the suspicions aroused by the slightly altered breathing, and physical signs offer little information until the exudate has filled a portion of the lung to a considerable extent; dullness is often a sign of relative value only. The crepitant r  le is seldom heard. It may be developed occasionally by obliging the patient to take a deep inspiration, but as a rule the disease is not detected until too late. If the breathing is tubular anywhere it is apt to be heard over the root of the lung. Dullness over the upper lobe is not as marked as at the base, owing to the rigidity of the sternum and chest wall and the retraction of

the lung away from the ribs. Tubular or bronchial breathing, when found, is most distinctive and sufficient for a diagnosis. It is even more intense than that heard in the adult, and is often more metallic in quality. Bronchophony is changed somewhat by the weak, quavering voice, and resembles egophony. Deep percussion is more apt to bring out the resonance of the whole chest, and should be employed carefully. Areas of dullness found in the chest of the aged may be due to senile changes, and are often confusing. Fluid in the pleural cavity is often overlooked, and much may accumulate with slight disturbance. The insertion of a needle is more often necessary to arrive at a diagnosis. Cases occur in which the exploration of the chest gives negative or confusing results, and it becomes necessary at times to depend somewhat upon the associated symptoms; especially is this true in the earlier stages.

These briefly constitute the more reliable signs and symptoms. The important point in diagnosis is to suspect and search for trustworthy evidences of the disease. It is necessary to appreciate the extreme frequency of pneumonia in old people; the fact that of all acute diseases of the aged, pneumonia is oftenest latent, and that it produces the highest range of temperature and greatest prostration. The symptoms to be observed with greatest caution are the chill, brown, red, or dry tongue, malaise, change in breathing, malar flush, cyanosis, delirium, cough, slightest pain, prostration, increase in pulse beat, and finally the rectal temperature. The symptoms are confusing at first, and often point to cardiac and cerebral disease. It is a wise rule to exclude pneumonia of the aged, and not disregard the slightest deviation from the usual standard. Of all the characteristic symptoms, elevation of the rectal temperature is the most constant and important. I have never noted its absence, even in walking cases or in the insane. At times it is the only indication of acute disease in the aged. Broncho-pneumonia may not be associated with pyrexia, but my experience would indicate at least that *lobar* pneumonia of the aged is seldom afebrile in character.

The diagnosis must rest largely upon the high temperature and the physical signs. The diseases which frequently simulate pneumonia of the aged are hypostatic congestion, simple congestion, oedema, capillary bronchitis, pleurisy with or without effusion, and tubercular infiltration. The differentiation can not always be made by consulting the physical signs, but generally it is not difficult if prominent features of the case are considered. The points of differential diagnosis are not so broadly defined in the aged, and analysis must be cautious and slow. Finally, pneumonia of the aged is often secondary or complicating, and many times hepatization is revealed at the autopsy as the direct cause of death. In these cases the dis-