

general principle it will be more convenient to divide the disease into stages, remembering always that these divisions are arbitrary, and that nature does not seem to feel herself bound strictly to abide by them. Patients very rarely succumb to the stage of invasion or preliminary congestion of the lung with active implication of the pleura. The danger here is not of dying; it is rather of loss of strength, which may be sorely needed later. The indication, therefore, in the ordinary case is to relieve the pain, to put the patient to bed and freely open the bowels, just as the mariner prepares his ship for an impending hurricane. The severity of the pain and any known or ascertainable peculiarity of the patient will decide the character and amount of the means for its relief. In the early days, at least, there can be no question of the safety of morphine, which should be used freely and frequently, hypodermically. Restlessness and an excited nervous system call for morphine nearly as loudly as does pain. Dyspnoea in the average case is at this stage due far more to the pleuritic pain than to state of the lung. But now and then we see a case in which so much lung-tissue is so rapidly invaded that the heart finds it difficult to adjust itself to the changed condition, and greatly oppressed breathing results. In such a case nothing gives such prompt relief as venesection, the freedom of which is to be proportioned to the age and vigor of the patient and its effect on the symptoms. With the *veratrum viride* treatment of the Philadelphia school the author has no personal experience. If internal antipyretics are to be used at all in pneumonia, it is only during the first stage that they are admissible. Even the best of them are somewhat depressing to the heart.

During the prevalence of the old doctrine of the nature of pneumonia and of inflammation, treatment was naturally addressed to the diseased or-

gan, and antiphlogistics were used externally and internally. We now recognize the fact—or believe it to be a fact—that the cause of death in the second stage is rarely asphyxia as a result of the amount of lung involved. The loss of function of a portion of the lung plays in most cases a *role* which is quite subordinate to that of cardiac exhaustion, dependent probably on the influence of toxins on the innervation of the heart rather than on changes in the myocardium. That it is mainly a toxæmia which weakens the heart, and not simply the mechanically-increased resistance in the right chambers, seems to be proved by the great fall in the pulse, as well as the breathing, coincident with crisis, although the physical signs over the affected lung area may show no appreciable change.

It is, then, the maintenance of nerve-force which we must try to secure. This means the avoidance of every unnecessary fatigue and the administration of the largest amount of the most nutritious liquid food which can be digested, with free ventilation of the apartment. It seems that the poultice and the envelopment of the chest in cotton or wool are relics of the old pathology. The poultice is the worst, as its frequent change involves notable fatigue and its weight is not insignificant. The author warmly recommends plenty of fresh air and sunshine. Morphine should be used more freely in the second stage than is customary. Here it is not called for by pain so much as by restlessness, cough, and sleeplessness. In any given case we must try to estimate the proportion of danger from respiratory failure. The smaller this danger the more freely can we use morphine, which will do more good in resting the nervous system than harm in other ways; and even in cases where the danger of respiratory failure cannot be disregarded, but morphine is indicated on other grounds, the inhalation of oxygen enables us to