form on account of the imperfect respiration and consequent tendency to asphyxia to which it gave rise.

The second part of the labors of the Commission consisted in attempting to determine the effect of shock as a cause of death during chloroform inhalation. In a paper published in the *Practitioner* I have attempted to distinguish between shock and syncope, my idea being that syncope is due to temporary stoppage of the heart's action and may be rapidly recovered from, while shock is due to paralysis of the abdominal vessels and is a very grave and persistent condition. Many attempts were made to produce syncope in the animals experimented upon by raising the head, by attempting to stimulate the vagus reflexly or even by direct irritation, but all these experiments seemed to show that stoppage of the heart's action through the vagus was not a dangerous condition. We also attempted to produce shock by a blow upon the intestine or by such an operation as avulsion of the toe nail—an operation which has frequently been followed in man by fatal results. In these attempts, however, we were unsuccessful—Lauder Brunton in *Br. Med. Jour.*

THE PRACTICAL DETAILS IN THE TREATMENT OF CROUPOUS PNEUMONIA.

A consideration of the treatment of acute croupous pneumonia renders it necessary, first of all, to define this form of pneumonia. Acute, croupous, or lobar pneumonia is a disease which is characterized by a well-marked beginning, course and termination in the great majority of cases. It is ushered in with a chill, fever, pain, dyspnœa, accelerated respiration and slow pulse. Among the physical signs are weakened and roughened respiration, prolonged expiration, or bronchial respiration, crepitation and dullness. The pathological changes are also typical. First, there is the stage of congestion; second, there is that of red hepatization; and third, there is that of gray hepatization, or of resolution. During the first stage, the capillaries which surround the alveoli of the affected part dilate and become overdistended with partially stagnant blood. Indeed, the blood vessels seem to be in a semi-paralyzed condition.

Croupous pneumonia is a disease, therefore, which shows its first visible manifesfations in the capillary circulation of the lung. In the course of a short time, the disease shifts or extends its sphere of activity. The overburdened blood vessels are no longer able to hold their contents, the serum, with leucocytes and red blood-cells, exudes through their walls and collects in the cavities of the air-cells. At first, this exudation is in a fluid condition, but when it becomes mixed or comes in contact with air, it coagulates, and in this way the alveoli are filled with a semi-solid substance resembling the dark-red color of the liver; and hence this stage is known as red hepatization. The active stage of croupous pneumonia is now completed so far as the local process is concerned, and that which takes place subsequently is merely the result of a chemical disintegration of the exuded material. Albuminous material, no matter where it collects in a mass, as it does here, must decay sooner or later. Pathological chemistry teaches us that a quick and moist degeneration of this sort takes on the form of fatty degeneration; that a slow and dry degeneration assumes the nature of a cheesy decay; that a still slower and drier process ends in calcareous degeneration. Now, it so happens that the exudation of croupous pneumonia undergoes a fatty degeneration after it has lodged in the air-vesicles for a period of from three to five or six days and even longer, and while this takes place the color of the affected part is changed from red to gray, and hence is called the stage of gray hepatization, also called that of softening or of resolution.

In the first stage there are found roughened and weakened respiration and generally a crepitant râle, together with some degree of dulness in the affected spot. In the second stage, or that of red hepatization, the crepitation disappears largely, and, perhaps wholly, while prolonged expiration or bronchial respiration and decided dulness take its place. In the third stage, or that of resolution, crepitation re-appears, and is followed by moist râles of all sorts.

On the other hand, it is very important to have a clear and distinct idea of catarrhal pneumonia, in order to distinguish it for therapeutic purposes from the croupous form. Catarrhal or lobular pneumonia, as it is often called, comes on more gradually and generally in the form of bronchopneumonia—*i. e.*, a catarrhal affection extending from the bronchi into the alveoli. The pathological changes are also typical in this affection. They chiefly consist in a proliferation and accumulation of epithelial cells within the alveolar cavities. Alveoli and groups of alveoli, in different lung areas, become filled in this manner, and it is very rare to find a whole lobe or lung entirely involved. The physical signs which accompany this form of pneumonia consist usually of dullness, crepitation, sibilant and mucous râles, together with prolonged expiration and bronchial respiration. The crepitation, when once present, is of a more permanent character than in croupous pneumonia. In fact, all the physical signs are less variable than in the latter.

That which is of the greatest local interest here are the facts that croupous pneumonia, so far as the lungs are concerned, is primarily an affair of