ing has been at all free, clots appear in the sputum for several days succeeding.

Source. The blood may be from congested bronchial mucous membrane, from hyperæmic pulmonary capillaries, if profuse is from an aneurysm or ulceration of the pulmonary artery. The pulmonary vein is rarely attacked. Fatal hæmoptysis is practically always due to the rupture of a pulmonary aneurym; these aneurysms are small, varying in size from a small pea or even less than this, to a cherry, situated on the wall of a cavity or crossing a cavity.

These aneurysms are usually single, but may be multiple, and, at times, may fill completely the cavity in which they are situated.

Cause. The bleeding may be due entirely to the inherent weakness of the vessel wall, to gradual ulceration or loss of support from surrounding tissues, to the severe strain of cough, or to increased blood pressure from a variety of causes.

In many cases a history may be elicited of severe or unusual exertion, within the preceding twenty-four hours, in few cases immediately preceding.

In two-thirds of all cases the bleeding occurs in the early morning hours or during the day, when the patient is at rest. At times it is preceded by a sense of pain or oppression in the chest, or, again, comes as a bolt out of the blue—no warning of any kind, the patient's first sensation being a warm salty taste in the mouth.

Some statistics show a greater frequency in spring and fall, and some writers have pointed out a seasonal fluctuation corresponding with pneumonia, while work done at the Phipps Institute would show the great frequency of the pneumococcus in the expectorated blood.

Effects. Samuel George Morton* wrote "Hæmoptysis. . . . . is accompanied by a depression of both mind and body, which the quantity of blood lost can in no degree account for." This mental depression is usually marked, there being no other symptom in the course of the disease which will create such terror in the average patient. I have known a patient with recurrences, whose nurse was not constantly with her, keep the push button of an electric bell in her hand for days, and sleep with it in her hand at night.

Some of this alarm, following an "initial" hæmoptysis, sends him to a physician, and, in this way, an early hæmorrhage may prove a God-send to a patient, allowing a diagnosis to be made when otherwise his attention would not have been drawn to his lungs. The bleeding may subside quickly with no after effects, this being particularly the case in the earlier stages. In the later stages of phthisis, the after effects may be more marked. Some of the blood may lie in cavities or

* Illustrations of Pulmonary Consumption, Philadelphia, 1834.