The general rule is that they appear as it were in epidemics. This has suggested that some common factor is a causative agent, and different authorities and investigators have suggested as this common factor (1) the presence of mixed infection, or (2) atmospheric changes.

In regard to mixed infection, all that can be said as the result of the investigations that have been made is that in a certain percentage of cases of hemoptysis mixed infection has been found. In no case, however, as yet has it been proven to be a causative agent, nor have the advocates of this theory given any explanation which adequately covers those cases in which mixed infection is present over long periods without hemoptysis. Nor does any such theory explain why as high a percentage as fifty of all cases of pulmonary tuberculosis never have hemoptysis. Special work has been done along this line at the Phipps Institute, and their conclusion on the point is that, "There is little doubt but that hemoptysis is mostly due to a mixed infection. It is probable that the offending agent most frequently is the pneumococcus. The pneumococcus seems to have a peculiar faculty of bringing about an exudation of the blood."

Some hemorrhages no doubt are due to ruptured blood vessels, but even in these it is probable that micro-organisms have something to do with the softening and breaking of the blood-vessels. Aneurismal blood-vessels frequently exist in large cavities. They are subjected to severe strain in coughing, but rarely rupture. One cannot help but think that when they do rupture it is because their walls have undergone a change.

In regard to atmospheric changes, it has been the observation of the writer that hemoptyses have usually occurred in groups of from three to ten. As a matter of fact out of one hundred consecutive hemoptyses only five occurred as isolated cases. They have generally occurred when the barometric pressure was extremely low or high, or following rapid changes from one extreme to the other; when the degree of humidity was great; when the amount of precipitation was large; and when the wind was of high velocity, and frequently from an easterly direction.

For example, in May, 1908, hemoptysis occurred at the Toronto Free Hospital for Consumptives on the seventh (8 cases), the fifteenth (1 case), the sixteenth (2 cases), the thirtieth (1 case), and the thirty-first (1 case), each of which corresponds with significant atmospheric conditions.

For on looking over the records of the Meteorological Station, Toronto, which were very kindly placed at our disposal by Mr. R. F. Stupart, Director, we find: On the seventh the degree of humidity great, the amount of precipitation large, the barometric