

with casts. This shows the profound toxemia which exists, and the labouring heart is not caused by a mechanical stoppage to the circulation, but by interference with its nutrition caused by a toxin. Elimination in typhoid and other systemic infections has long been recognized to be of value, but the stasis theory of pneumonia has greatly interfered with its application in the treatment of pneumonia. Inhalations of oxygen, which some have believed to be so efficient, were based upon the theory of a limitation of atmospheric air, though it is rare in pneumonia that more than one-fourth of the aerating surface is involved, and experience shows that from other causes not associated with toxemia more than one-half the entire surface of the air cells may be out of use, without seriously compromising respiration. The use of digitalis from the beginning of the disease is likewise based upon the theory that the heart had an extra amount of work to do, because of the difficulty in pushing the blood through the engorged lung. No one has seriously proposed to treat typhoid fever with large doses of digitalis, notwithstanding that the heart sometimes fails in that disease.

A study of a large number of cases treated on the old theories of elimination shows its efficiency in pneumonia. Of course, by the older physicians, this was carried to an extreme. Bleeding, calomel, and sometimes emetics, were employed, regardless of the condition of the patient, but solely to combat a hypothetical condition which was supposed to be productive of inflammation. Notwithstanding these drawbacks, the results as shown in the mortality table were favourable, because whatever the errors of this treatment, it in effect secured a rapid elimination of toxic products from the blood.

At present there is a tendency to return to the treatment of the fathers, and we predict that with a recognition of pneumonia as a toxic disease, and not one in which the chief difficulty is stasis, there will result such a change in treatment as will materially lower the present frightful mortality. The excellent results achieved in the use of baths and friction and elimination by the kidneys will be supplemented by the use of normal salt solution injected hypodermically, or into the rectum, or transfused directly into a vein. If the latter method is employed, it must be followed by the abstraction of an equal quantity of blood. Even in cases in which the solution is used by the bowels or under the skin, it would probably be better to supplement it by the withdrawal of a certain amount of blood; this eliminates the toxin and dilutes the blood