

tine, intestinal perforation, low blood pressure, cardiac weakness, dicrotic pulse, arteritis, myocarditis, delirium, stupor, tremor and meningism.

Secondary Infections—Pneumonia, broncho-pneumonia, sepsis.

Of course a relationship exists between these groups as the bacillemia gives rise to the endotoxemia, which, itself, no doubt, predisposes the patient to secondary infections.

The advantages to be gained by keeping this classification in mind while determining on the treatment of a case is that our methods are likely to be more rational. For instance, in fighting the bacillemia one can understand the benefit to be derived from quietness, fresh air and the selection of a dietary in keeping with the assimilative powers of the patient, because these measures should tend to increase the resistance of the body against the bacilli, but one cannot understand how starvation for a week, as advocated by some, can be of service. The giving of any vaccine, serum or drug which will increase the antibodies of the blood is rational.

From theoretical considerations typhoid vaccine should be of value as a preventive measure and clinical observations appear to support this view. As a curative agent, however, there does not appear to be any evidence to show that it is of any value. Again, the giving of any drug which will increase the antibodies of the blood is rational therapy. Smith (*Lancet*, Nov. 10, 1910) reports that the administration of quinine increases the opsonic index of patients with infectious fevers. If this be true, the giving of quinine in typhoid fever would be rational therapy.

The importance of having a substance which will increase the potency of the antibodies in the blood is well illustrated by the fact that in cases of relapse, a condition in which one would expect the bactericidal substances of the blood to have been augmented by the primary attack, a fatal termination is uncommon. In 1,236 cases of typhoid fever treated at the Toronto General Hospital during six years ending September 30th, 1910, there were 65 relapses, of which only one died. In the fatal case the course of the fever was unusual and the temperature was normal for barely 24 hours preceding the relapse.

Again, in the treatment of bacillemia if one had an antiseptic which when administered internally would exercise a germicidal action in the blood, as mercury and salvarsan do in syphilis, its exhibition would be correct, but the principle of giving intestinal antiseptics for the same purpose is utterly unsound.

In the treatment of the endotoxemia of typhoid, if we believe