

certain other problems; in particular the problem of the frequently beneficial effect of a milk dietary on "serous hæmorrhage" from the kidney, and the comparative rarity of thrombosis after acute fevers, such as Malta Fever, where a milk diet is not imposed upon the patient. We obtain at the same time indications for the prophylaxis and after treatment of thrombosis, both when it occurs in connection with typhoid fever and when it occurs in connection with other diseases.

The remedial measure which would seem indicated is the exhibition of citric acid. The same treatment, initiated as soon as the danger of intestinal hæmorrhage has been surmounted would be appropriate for prophylaxis of typhoid thrombosis. Or, as an alternative, we might, with a view of restricting the intake of lime salts, appropriately undertake a partial decalcification of the milk. It has been pointed out that a partial decalcification is advisable also from the point of view of rendering it more easily digestible, and of preventing constipation. This partial decalcification can be readily effected by adding to the milk from .25 to .5 percent of citrate of soda, from 20 to 40 grains per pint.

Sir A. E. Wright was the first to conceive the practical possibility of antityphoid inoculation. Following the developments of Ehrlich's theory of immunity by careful experiment and the results of the Pasteurian inoculation against anthrax, and Hallkine's inoculations against cholera in India, he conceived the idea of antityphoid inoculation. But this involved serious and great risks; first, the risk of disseminating the germ of the disease; second, that of communicating the disease in a serious form in any case where by mischance he might happen to encounter a patient who possessed an abnormal susceptibility to the typhoid infection.

The difficulty was solved for him when he learned from Professor R. Pfeiffer that he had obtained the specific agglutination reaction to typhoid by the subcutaneous inoculation of a heated typhoid culture. This observation, since it pointed to the continued presence of effective vaccinating elements in the heated culture, immediately supplied the basis for the system of anti-typhoid inoculation which he employed.

By experiment he showed (a) that the typhoid culture is unaltered so far as its immunising properties are concerned, by exposure to the temperature which is required for the devitalization of the bacteria; (b) that the chemical relations which obtain between the protective substances of the blood and the unheated typhoid bacillus obtain also between these protective substances and the typhoid bacillus after it has been devitalized by exposure to a temperature of 60°C ., and (c) that inoculation of cultures of typhoid bacilli which have been sterilized by exposure to a temperature of 60°C ., induces in the organism an el-