

1881		1881	
Jan. 23	Voided 42 oz.	Feb. 18	Voided 96 oz.
" 24	" 45 "	" 19	" 63 "
" 25	" 36 "	" 20	Vomiting began.
" 26	" 37 "	" 21	Stop mixture
" 27	" 33 "	" 21	Voided 72 oz.
" 28	" 36 "	" 22	" 60 "
" 29	" 36 "	" 22	Diarrhoea set in
" 30	" 45 "	" 23	Voided 60 oz.
" 31	" 37 "	" 23	" 48 "
Feb. 1	" 36 "	" 24	" 39 "
" 2	" 36 "	" 25	" 29 "
" 3	" 40 "	" 26	" 13 "
" 4	" 45 "	" 27	" 9 "
" 5	" 45 "	" 28	" 6 "
" 6	" 51 "	Mar. 1	" 2 "
" 7	" 61 "	" 2	" 1 "
" 8	" 60 "	" 3	" 0 "
" 9	" 81 "	" 4	" 0 "
" 10	" 63 "	" 5	" 0 "
" 11	" 75 "	" 6	Died
" 12	" 108 "		
" 13	" 96 "		
" 14	" 100 "		
	Stop Sol. Glon. and give Tinct. Fer. Mur. M xx ter die		
" 15	Voided 96 oz.		
" 16	" 96 "		
" 17	" 84 "		

infection for a long time latent, so that as soon as proper conditions are present it will manifest activity.

Carefully-observed cases also establish the fact that it is capable of producing typhoid fever although admitted to the system in very minute quantities and much diluted. It seems that the opportunities for the admission of the virus, in such small amounts as have been known to produce typical typhoid fever, must be so frequent and general that a vast majority of the community must at some time or other have been exposed to it. Probably, therefore, it requires, in a degree even greater than do other zymotic poisons, suitable pabulum for its development, and a state of system predisposing to its zymotic action.

At times the virus is so concentrated and active that, in whatever way it gains entrance to the body, it infects the system in nearly every instance and causes a virulent zymosis. On the other hand, the virus may be much less active: so that, supposing it to be taken into the alimentary canal, if the secretions are normal and the glands of the mucous membrane not susceptible or vulnerable, it may be thrown off without the production of the disease. Again, the virus may be more active or more fully propagated in the intestinal canal, and cause marked irritation of the enlarged solitary and Peyerian glands of the mucous membrane, so that the intestinal lesions become considerable; and yet the virus may be arrested in the swollen mesenteric glands and no marked infection of the system occur. This agrees with the well-known fact that no constant relation exists between the degree of intestinal lesion and the intensity of the primary constitutional infection or zymosis.

It is further to be noted that even in cases where primary infection of the system has not been intense, and where the intestinal lesions have been quite marked, it is quite possible, and indeed probably quite frequent, for the morbid intestinal contents to favor further development of the specific virus, and thus endanger continued absorption, or else for the putrid debris and secretions to give rise to a secondary non-specific septicaemia.

It thus seems to me that we must recognize practically the following different primary forms: first, ordinary typhoid fever, with moderate intestinal lesions and moderate zymosis; second, cases with grave intestinal lesions and moderate zymosis; third, cases with grave zymosis and profound constitutional symptoms from the start.

I have spoken of the first form as ordinary typhoid fever, because my own experience would indicate that this and—to a less degree—the second form are by far the most common in this district, although far too frequently individual cases or limited outbreaks of the grave primary zymotic type occur.

I have referred to these familiar views simply to call attention to the immense importance of the rôle which the gastro-intestinal mucous membrane plays in typhoid fever from the earliest moment.

## Progress of Medical Science.

### REMARKS ON SOME POINTS IN THE TREATMENT OF TYPHOID FEVER.

By WILLIAM PEPPER, A.M., M.D.,

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I have no intention, in the limited time at my disposal, of entering into a full discussion of the treatment of typhoid fever in its various forms and with all its complications, but simply to state in a brief manner the results of my observation as to the management of the ordinary form of this fever, as I have met with it both in hospital and in private practice in this city and its neighborhood.

Although the attempts to isolate the particular poison of typhoid fever have not met with full success, it seems to be generally accepted that this disease is caused by a special *materies morbi*, for the most part admitted to the system through the alimentary canal, although capable, also, of gaining admittance by inhalation. I am disposed myself to believe that this poison is capable of being produced or brought into activity under conditions much more varied than it has recently been the habit to assert.

However this may be, the poison presents certain peculiarities which are important to note from their bearing upon the treatment of the disease. It is undoubtedly capable of retaining its power of