matic injection of sulphate of morphine. For continuous use the sulphate of quinine and gelsemium are of great value. The former may be given in five-grain doses repeated every fourth hour, or in ten-grain doses at night and in the morning. The tincture of gelsemium may be given in fifteen-drop doses every fourth hour, or the fluid extract, in five-drop doses at the same intervals. Rest and hot applications to the head are valuable palliative adjuncts to medicinal treatment. All the organs should be encouraged to perform their functions as perfectly as possible, so as to promote the general nutrition of the body, and this should also be aided by the administration of such blood and nerve tonics as arsenic and iron.

AN INVESTIGATION AS TO THE FREQUENCY OF TYPHOID FEVER IN INFANCY.

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THIS investigation was undertaken because one of us had a feeling that typhoid fever might be more common in infancy than is ordinarily supposed. It was thought possible that on account of the mildness of the symptoms and their resemblance to those of the ordinary gastro-intestinal disturbances of infancy, the disease might often be unsuspected or overlooked. The recently discovered method for the diagnosis of typhoid fever, based on the action of the blood of typhoid patients on cultures of the typhoid bacillus—Widal's serum reaction—seemed to offer a means for determining whether these suspicions were well founded or not.

This test was accordingly made in fifty cases during the past summer. The babies were all under two years of age, out-patients at the Infants' Hospital. The ages of the patients by months were as follows:

Months.	Cases.	Months.	Cases.	Months.	Cases.	Months.	Cases.
2	1	7	4	11	6	15	1
3	3	8	7	12	3	17	1
4	3	9	3	13	3	19	2
6	3	10	2	14	4	23	4

No attempt was made to pick cases of any especial clinical type or severity, but rather to take cases of all types and of various grades of severity. The clinical diagnoses were:

Simple diarrhea	2
Fermental diarrhea	45
Neo-coliitis	3

With the exception of the case detailed below, only one test was made in each case.

The day of the disease on which the test was made was as follows:

Day of Disease.	Cases.	Day of Disease.	Cases.
3	1	18	2
4	1	20	1
5	4	21	3
7	5	28	1
8	3	30	2
10	1	31	2
11	2	33	2
12	3	35	1
14	4	42	2
15	6	56	1
16	2		

In carrying out the test a twenty-hour-old bouillon culture of an actively motile, virulent organism, grown at room temperature, was used. Ten parts of this culture were mixed with one part of fresh blood serum

and examined between slide and cover-glass. Only distinct clumping of the organisms was accepted as positive. The limit of time allowed was one hour. In only one case was a positive reaction obtained. This case is reported more fully below.

The question of a previous attack of typhoid in the mother was investigated in thirty-nine cases. Thirty-three had not had the disease, while six had had it at some time in the past. The number of years since the attack were twenty-four, twenty, fifteen, ten, seven and four. Among these latter cases was the mother of the child whose blood gave the positive reaction.

The history of this case is as follows: The mother had a "slow fever" ten years ago. Since that time she had not been ill. Her blood on July 16th gave a positive serum reaction in fifteen minutes. There was no typhoid fever in the neighborhood, as far as known. The child was fed on the breast for three months, and then on an uncooked mixture of cows' milk and water. Its illness began on July 8th. When seen on July 12th it was seven months old, and only moderately sick. It had lost its appetite, had pain in the abdomen, was vomiting a good deal, and had six or eight large, watery, greenish, slightly foul movements, containing curds, but no mucus or blood, daily. Under treatment the vomiting soon ceased, and the movements were normal in every way on July 21st. At no time was there any abdominal tenderness or distention. There were no rose spots and no splenic enlargement. The temperature ranged between 38° and 39° C. until July 19th, after which it remained normal. A positive serum reaction was obtained on July 12th—fifth day of the disease—in fifteen minutes, and another on July 16th—ninth day of the disease—in twenty minutes.

If it were not for the positive serum reaction of the mother, this case could only be considered as a case of infantile typhoid. The marked reaction in her, however, suggests the possibility, if not the probability, that the serum reaction of the child may have been inherited from her or imbibed from her through her milk. The fact that the reaction was so marked on the fifth day of the disease lends some color to this conception. The absence of the reaction in the children of the other women who had had typhoid would count against it if they had themselves shown the reaction. The fact that the course of the disease was mild and not accompanied by the usual signs of typhoid cannot have much weight, as we know but little regarding the course of typhoid in infancy, and what little we do know teaches us that it runs a very mild course. On the whole, therefore, we are inclined to think that the reaction was due to the mother, and not to the disease.

The following conclusions seem to a certain extent justified:

(1) Typhoid fever, as has been commonly believed, is an unusual disease in infancy.

(2) It is possible that women whose blood gives a positive Widal reaction, even though it be years after the occurrence of the disease, may in some way transmit this to their infants.

A CONVALESCENT HOSPITAL AT NAGASAKI.—It is reported that Surgeon-General Sternberg has recommended to the Secretary of War that a military hospital for convalescents from the army of the Philippines be established at Nagasaki, Japan.