and wait for a report, if this is done when the patient is first seen. Only in an exceptionally severe case should serum be given before the type is determined. Such determination takes on the average about 12 hours. Where sputum could not be obtained I have often resorted to lung puncture in the consolidated lung area to obtain a culture of the organism, and I have never seen complications result from such a puncture.

V. Some use a so-called "polyvalent serum" and not a specific Type I serum.

To mention the so-called "polyvalent serum" is to condemn it. There is no excuse for its use. Up to the present time a serum of sufficient potency to be of curative value has not been developed except in Type I; therefore the use of a mixed or polyvalent serum is not warranted.

It is to be remembered that Type I anti-pneumococcic serum is standardized and must have a definite protective power before it is distributed for therapeutic use.³ The Rockefeller Institute⁴ has adopted the standard that .2 c.c. of anti-pneumococcic serum must regularly protect against at least .1 c.c. of a culture which is shown by animal tests to be of proper virulence. The standardization tests are carried out by inoculating mice. So far it has not been possible to produce a serum in the other types of pneumonia which has sufficient protective power to warrant its use.

The following series of 35 cases include all the Type I pneumonia which occurred in my service at the Naval Hospital, Chelsea, Massachusetts, as well as cases treated in private practice since leaving the service.

No. cases, 35; white count average, 26,000.

No. deaths, 2; amount serum average 205 c.c. Mortality, 5.7%; complications empyema, 2. Febrile period, average, 66 hrs.

Two deaths occurred. One was due to empyema five weeks after the patient had recovered from pneumonia. This patient responded promptly to serum treatment. His temperature became normal in a few hours following a single injection of serum. In a few days empyema developed, for which a rib was promptly resected. The empyema proved fatal.

The other death occurred in a young man who was admitted to the hospital with all the symptoms and signs of lobar pneumonia. His sputum showed Type I pneumococcus. His throat culture was positive for diphtheria and streptococcus-haemolyticus. He was given diphtheria antitoxin followed by two injections of Type I serum, and apparently recovered, for his temperature, pulse and respiration were normal on the fourth day. On the fifth day his symptoms began to return. He received four more 100 c.c. injections of Type I serum, but did not respond to treatment. An autopsy showed a diffuse broncho-pneumonia of the lower lobes of both lungs, hypostatic pneumonia of right upper and middle lobes, with 150 c.c. of sanguineous

exudate in the right pleural cavity. Whether this patient actually died of Type I pneumonia seems questionable, as the autopsy report showed a broncho and not a lobar involvement.

The normal mortality of Type I pneumonia is 25 to 30%. The mortality in this group of 35 serum-treated cases was 5.7%. In a series of 22 cases of Type II pneumonia in the same class of patients during the same period, there were six deaths, a mortality of 27%, which is about the normal.

In 495 reported cases of type I pneumonia treated with serum there was an average mortality of 10.5%. These included many cases treated late in the disease.

The average duration of the pneumonia in this series of 35 cases as determined by the temperature and symptoms was 66 hours; in other words, the time from the initial chill and fever until the temperature was again normal was less than three days. The course of the disease was thus decidedly shortened. In the majority of the cases the fever ended by crisis. These patients were practically all treated during the first or second day of the disease and none later than the third day.

By itself this series of 35 cases is too small to arrive at definite conclusions, but when taken in conjunction with the other groups of reported cases collected from literature, it furnishes additional evidence of the value of the serum treatment, of type I pneumonia.

REFERENCES.

1. Edwin A. Locke, M.D.; Henry M. Thomas, Jr., M.D.; Dwight O'Hara, M.D. *Acute Respiratory Infections* (From the Pneumonia Service, Boston City Hospital); *Boston Medical and Surgical Journal*, October 21, 1920.
2. Anti-pneumococcus Serum, *Journal, A. M. A.*, January 8, 1921.
3. Freshly bottled serum may always be obtained by writing or telephoning the Department of Public Health, State House, Boston, Massachusetts, or from the Antitoxin and Vaccine Laboratory of the Department of Public Health at 375 South Street, Jamaica Plain, Boston 30, Mass. Dr. Benjamin White, Ph.D., who is director of this laboratory, recommends that the serum used be water clear, free from sediment, and free from any tinge of hemoglobin, and that it be used as soon after its preparation as possible in order that the full potency of the serum may be utilized.
4. Monograph No. 7, Rockefeller Institute of Medical Research.

A CASE OF MESENTERIC THROMBOSIS.

BY JOHN G. HENRY, M.D., F.A.C.S., WINCHENDON, MASS.

ALTHOUGH, fortunately, of rare occurrence, mesenteric thrombosis is attended by such a high death rate that it must command the respectful interest of the surgeon.

Writing on this subject in the latest volume of Ochsner's "Surgery," Bottomley says: "Even with early operation, we can expect, I believe, only occasional recoveries. Operation offers the only hope, and that but little. The mortality in unoperated cases must be 100 per cent."

One of my surgical friends, who has had a wide experience in abdominal work, told me recently that he had operated on five cases, all of them fatal.

My personal experience with this condition has, perhaps fortunately for me, been limited to the one case here reported.

Mr. L., a laborer, 66 years old, patient of Dr. A. G. Pelletier, was admitted to Millers River Hospital, July 16, 1920.

He had worked in a hay field the previous day and went to bed in his usual health. About midnight was taken with severe abdominal cramps attended by vomiting.

Quoting from Dr. Pelletier's notes of the case: "I was called to see him about 2.30 A.M. At that time he had general pains in his abdomen, with severe colic of short duration, about once in fifteen minutes. The symptoms seemed to indicate an acute obstruction. A high enema cleared the bowels thoroughly and lessened the pain, but did not stop it entirely. I left the patient at 6 o'clock and returned at 10.30. Upon examination, the pain and tenderness seemed to be located chiefly over McBurney's point. As the abdominal condition strongly suggested appendicitis, I took him to the hospital."

On examining the patient soon after his admission, I found him a very spare man; in fact, his general appearance suggested tuberculosis. His pulse and temperature were normal, he had not vomited for several hours past, had but little pain, and insisted that he felt much better. His heart and lungs seemed normal, but he had some evidence of arterio-sclerosis. His abdomen was somewhat tympanitic, with marked tenderness and muscular rigidity in the right lower quadrant. There was no history of any previous attack.

It was evident that he had some serious abdominal lesion, but I expressed my doubts to Dr. Pelletier about its being a case of appendicitis.

Operation at 3 P.M., thirteen hours after onset, assisted by Dr. Pelletier. On opening the abdomen through a right rectus incision, a black mass came into view which at first glance appeared like an enormous blood-clot, but on examination proved to be a section of ileum, somewhat more than a foot in length, considerably dilated and absolutely black.

Intestinal clamps and rubber tubing were hurriedly sterilized in alcohol, and the clamps applied well to either side of the necrosed gut. A section of ileum, 18 inches in length, was resected and the mesenteric vessels tied off. An end-to-end anastomosis was done by McGrath's method, the operative area sponged out with salt solution, and the abdomen closed with a cigarette drain.

The operation occupied fifty minutes, and the patient was put to bed in fair condition. Salt solution per rectum was given at four-hour intervals for forty-eight hours. The drain was removed on the fifth day. There was no discharge except a little serum. He was given small sips of water on the third day and nothing but liquids for two weeks.

Convalescence was normal, except for a very slight phlebitis which developed just after he began to sit up. He left the hospital August 11, and a few weeks later resumed his usual work, and has been perfectly well since.

Book Review.

The Psychoanalytic Study of the Family. By J. C. FLÜGEL. Pp. 259. London, New York, Vienna: The International Psycho-Analytical Press. 1921.

This third volume in the admirable projected series of the International Psycho-Analytical Library is fully up to the standard of its predecessors. The problems which it discusses are of the greatest importance for a clear comprehension of the neuroses, as recent psychoanalytic investigation has proven that these neuroses arise on the basis of family conflicts dating from early childhood, which may later produce an inability to face the realities of adult life, when these arise as a precipitating factor.

Most of the material contained in this book has already found a place in the literature of psychoanalysis, but the author's contributions in the last few chapters are not only decidedly suggestive, but likewise original and are based upon scientific data of the first portions of the volume. The entire question is admirably treated from the psychological standpoint, while the ethical and sociological considerations are based upon what psychoanalysis has already revealed in the development of the child and its relation to the family during the periods of growth and maturity. Although the volume is clearly written, yet the material accumulated therein will be somewhat difficult to understand for one who is not already familiar with the growth and development of psychoanalysis, particularly within the last few years.

However, it will repay close study, even for the uninitiated, and both the neurologist and the pediatrician will find therein, material of inestimable value, in dealing, respectively, with the neuroses of adult life and the development of the character traits of childhood. Consequently it can be highly recommended, not only because of its sound scientific character, but likewise for the illumination it gives for a true understanding of our mental welfare and progress from the earliest days of childhood.

IMPORTANT NOTICE.

Announcement of meetings to be held on and after next Thursday should reach the desk of the Editor of the JOURNAL not later than next Saturday before noon. The printers do not work Saturday afternoon and the material is locked up in the forms on Monday, and goes to press Tuesday morning. The wrapping and mailing begins Wednesday. Please forward copy early.