

and Williams found antipneumococcus serum from the sheep to be protective for mice and to stimulate phagocytosis. The correspondence between bacteriotropic action and protective power was variable, however, so that it did not appear certain that the protective power of the serum was due entirely to its influence on phagocytosis. We are, of course, not sure that events in the animal body correspond with those in the test glass.

Some of the serums which have been prepared have been used therapeutically in man. The results have not been sufficiently satisfactory to put them on a good basis, although some favorable reports have been given. The serum of pneumonic patients shows an increased agglutinating power for the pneumococcus. The maximum is reached at or near the time of crisis, but rarely has a higher value than 1 to 50 to 1 to 60 (Neufeld, Rosenow). It disappears quickly after recovery. In immunized animals the agglutinating power may be pushed to much higher limits. Not all strains yield agglutinins equally, and not all are agglutinated equally by the same serum. According to Collins, pneumococci fall into different groups, depending on their agglutinating properties; the same author determined the presence of group agglutinins in an immune serum. Neufeld states that avirulent strains were not agglutinated by the serum of pneumonic patients.

OTHER INFECTIONS BY THE PNEUMOCOCCUS.

Complicating infections by the pneumococcus during the course of pneumonia were mentioned above. They may occur by way of the lymph channels, as in pleuritis, pericarditis and peritonitis (through the diaphragm), by contiguous extension, as in infection of the bronchi, nose and, perhaps, the middle ear, or as metastatic infections following the invasion of the blood stream by the organisms. It is undoubtedly in the last named manner that meningitis, endocarditis, arthritis, muscular and subcutaneous abscesses arise.

Other infections by the pneumococcus occur independent of the existence of pneumonia. Such conditions are alveolar abscesses, conjunctivitis, dacryocystitis, ser-

Mode of Infection.

pent ulcer of the cornea, inflammation of the middle ear, meningitis, enteritis, rarely peritonitis, and pneumococcus septicemia which may be complicated by infection in various organs. The eye is exposed to infection from without and the ear from the pharynx. The meninges may be infected by way of the middle ear or the nose, or the organisms may gain entrance through the circulation from a primary focus in another organ, perhaps an undiscovered focus. Infection of the peritoneum may follow an intestinal infection; a pure pneumococcus infection of the peritoneum in the absence of pneumonia is extremely rare. Pneumococcus infections of the eye, ear, intestines and peritoneum are likely to be accompanied by other organisms.

Pneumococcus conjunctivitis occurs in epidemic form and the same precautions should be taken to limit it as for the limitation of influenza conjunctivitis.

Serpent ulcer of the eye, a progressive phagedenic process in the cornea, has the pneumococcus as its essential cause, although other organisms may be present. Roemer treats the condition with an antipneumococcus serum and claims that he is able to arrest the process if the treatment is begun sufficiently early. The serum is injected beneath the conjunctiva.

Clinical Reports

A CASE OF ACCIDENTAL ESERIN (PHYSO-STIGMIN) POISONING WITH RECOVERY.

B. F. STEVENS, M.D.
EL PASO, TEXAS.

Patient.—A woman, aged 28, because of a mistake in telephoning a prescription, received a dose of two grains of eserine sulphate hypodermically, instead of a fiftieth of a grain as was intended.

History.—I had operated on this patient four hours pre-

viously for a double pyosalpinx, and gave the eserine to aid in passing flatus. An hour before receiving the eserine she had been given morphine, $\frac{1}{8}$ grain, with atropine, $\frac{1}{200}$ grain, for pain. Within two or three minutes after receiving the eserine, she turned purple and her bowels moved profusely and involuntarily. Respirations became shallow, the trachea, pharynx and larynx filled with mucus, and the pulse became imperceptible, even over the carotids. She remained unconscious for about twelve hours.

Treatment.—The following drugs were given hypodermically in divided doses: Atropine, $\frac{1}{10}$ grain; nitroglycerin, $\frac{1}{30}$ grain; strychnine, $\frac{1}{10}$ grain; brandy, a dram, and aromatic sulphuric acid, a dram; 1,200 c.c. of normal salt solution was also given subcutaneously around the breasts. She was surrounded with hot water bottles and given plenty of fresh air, the tongue being drawn forward with ordinary vulsellum forceps. She was catheterized every half-hour.

Recovery was probably due to the fact that she had received a small dose of atropine and morphine a short time before the eserine was given. Potter says that immense doses of eserine may be given without harmful effect if preceded by even minute doses of atropine, which is the physiologic antidote. The salt solution, no doubt, was of great benefit, because eserine is eliminated almost entirely through the urine. A mild enteritis followed, but this persisted for only a short time.

OBSTRUCTIVE JAUNDICE CAUSED BY A ROUND WORM IN THE COMMON BILE DUCT.

J. G. HILLEARY, M.D.
DUBOIS, PA.

The patient was a bright, well-developed boy, aged 10, who had never been confined to bed on account of sickness in his life. I was asked to see him on the eighth day of his illness. Besides being intensely jaundiced, his trunk and limbs were covered with large patches of urticaria, which caused him great annoyance from the burning and itching. Nausea and vomiting, with loss of appetite were present throughout the attack. The tongue was coated and the mouth dry. Bowels were constipated; stools clay colored, pasty and fetid. Temperature was normal; pulse 60. The lungs and heart were normal; the abdomen was normal except for pain and tenderness over the region of the gall bladder.

Having lately read an abstract of an article in the October number of the American Journal of the Medical Sciences, by W. Epstein, on the diagnostic significance of strangulation marks on round worms, and with the cause of the obstructive jaundice in this child not clear, coupled with a history of the passage of two round worms a few months previously, I made a probable diagnosis of a round worm in the common duct. Calomel and santalin were given, and in ten hours the worm was passed with complete relief of the symptoms. The worm showed a distinct strangulation mark two inches below the head.

As such markings are never found normally, I think it is safe to say the worm was the cause of all the trouble in this case.

SAFETY PIN SAFELY PASSED BY A CHILD OF ELEVEN MONTHS.

L. W. LITTIG, M.D.
IOWA CITY.

On October 19, Dr. W. D. Phillips, Victor, Iowa, consulted me regarding an 11-months-old baby who had accidentally swallowed an open safety pin, one and one-eighth inches in length. I was inclined to locate the pin with the x-ray and to at once remove, if seen in the stomach, but it was decided to wait for trouble and then to operate without delay. On October 24, a few hours less than five days after the pin had been swallowed, it was passed by the child. No inconvenience at all was suffered and no special treatment was given. The parents lived in the country, and did not bring the child for x-ray examination; hence, there was no opportunity to observe the progress of the pin through the intestine.