

MEDICINE

Chemical Helps Body To Fight Streptococcus Infections

New Treatment Promises Aid Against Infections Such As Scarlet Fever and Erysipelas; Does Not Kill Germs

FIRST American use of a new chemical that promises to be a potent weapon against dangerous streptococcus infections, ranging from septic sore throats to scarlet fever, erysipelas and puerperal fever, was reported to the Southern Medical Association at its meeting in Baltimore.

Successful results of the treatment in 17 out of 19 patients and convincing laboratory experiments with mice were described by Drs. Perrin H. Long and Eleanor A. Bliss of the Johns Hopkins Medical School.

The medicine comes in two forms. One is a bright red solution for hypodermic injection, known by the trade name of Prontosil. The other is a tasteless white tablet to be taken by mouth, which looks like aspirin and is called Prontylin. The two are closely related chemically. They were first tried in Germany and are products of the German Dye Trust. Besides these two, Drs. Long and Bliss have tried other related chemicals. Chemists will know them as para-amino-benzene-sulfonamide and certain of its chemical derivatives.

The chemicals do not kill the dangerous streptococcus germs. But they check the growth of the germs and damage them so that they become ready prey to the disease-fighting white blood cells of the patient's body. For this reason, Dr. Long pointed out, the chemical treatment cannot be expected to succeed in patients very near death from the infection. The chemicals must have at least 36 hours to work in, and the patient must have enough fight left in his body to destroy the germs after the chemicals have damaged them and checked their growth.

Many Diseases Affected

Theoretically the chemical treatment should work in any disease caused by hemolytic streptococci, including wound infections with streptococci. Actually the Baltimore investigators have treated patients suffering from erysipelas, infectious abortion, scarlet fever, acute tonsillitis caused by streptococcus infection, chronic cystitis, chronic impe-

tigo, infections of the eye following injuries, otitis media (inflammation of the middle ear), and mastoid disease with septicemia.

The chemical treatment has been used by numerous German and French physicians who all reported successful results. Dr. Long became interested last summer when he heard Dr. Leonard Colebrook of the English Medical Research Council and Dr. Méave Kenny and associates on the honorary staff of Queen Charlotte's Hospital, London, report their successful results with the treatment at a medical meeting in London. Dr. Long brought some of the chemicals back with him to Baltimore, as they were then not available in America.

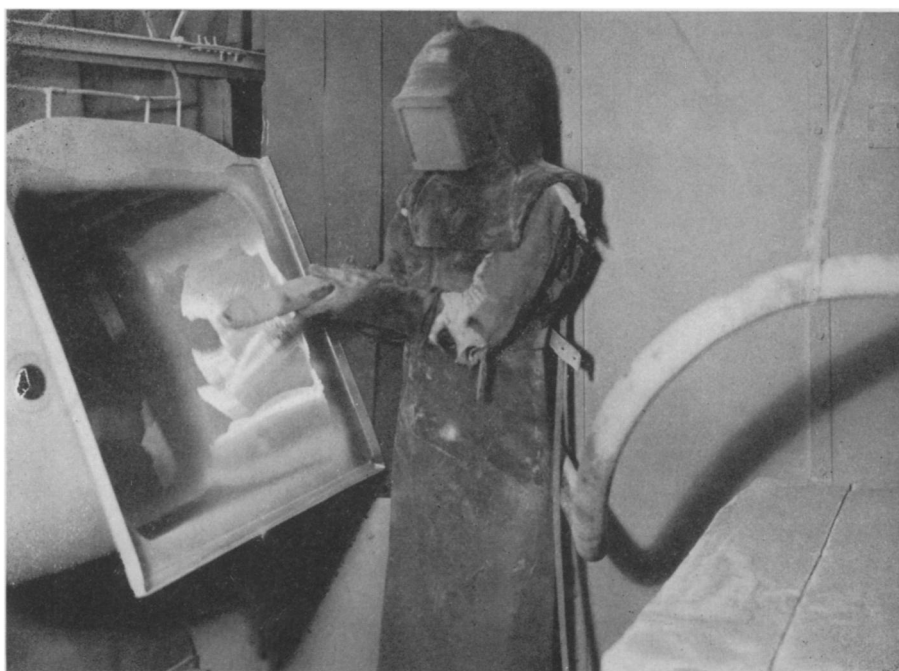
Experiments were at once started with mice. Doses of virulent streptococci

which had never failed to kill a mouse were injected into the peritoneal cavity of these animals. The animals were then treated with Prontosil solution and all survived. Those untreated died of the streptococcus infection.

On Sept. 6 the first patient in the United States was treated with the chemical. Since then, 18 others have been treated, all but two recovering following the treatment. The Baltimore investigators expect to continue the work during the coming winter.

They do not regard the treatment as a cure, because they have used it in so few cases that it is too soon to be that optimistic. Their results, however, and particularly the mice studies, have led them to say that the treatment "promises to be of value" and "warrants the careful clinical use" of the chemicals "in the treatment of human beings ill with infection due to beta hemolytic streptococcus."

The "careful" use means that physicians must watch the patients being treated with the new chemicals. The chemicals are relatively non-poisonous, but too long continued use may result in fever and symptoms of poisoning, and possibly other, as yet unknown, harm. The chemicals were given to one normal person who



WHO IS HE?

Not the member of some hooded order, nor even a deep-sea diver. He is a worker engaged in sandblasting at the plant of the Briggs Manufacturing Company, and his costume is designed to protect him from the resulting dust.