MEDICINE

New Typhoid Remedy

Chloromycetin, which is extracted from a mold, will bring the fever of patients with this disease to normal within three days. Not available at present.

➤ TYPHOID FEVER patients next fall or early winter may get a new medicine which will bring their fever to normal in three days instead of the usual three or four weeks. But right now there is not an ounce of the precious new drug available anywhere.

The drug is chloromycetin. Like penicillin, it was extracted from a mold. But, unlike penicillin and streptomycin, it is a potent remedy for both typhoid fever and the quite different disease, scrub typhus, which attacked more than 6,000 American troops during the Pacific campaign in the last war. Neither penicillin nor streptomycin is effective in these two diseases, nor has any other drug been as effective against them.

Results of the first field test of the new drug as a remedy for scrub typhus were reported by Dr. Joseph E. Smadel of the Army Medical Department Research and Graduate School. He has just returned from Kuala Lumpur, Federation of Malaya, where he headed the Army's scrub typhus research unit. With him in the unit were Dr. Theodore E. Woodward of the University of Maryland, Col. Cornelius B. Philip, U. S. Public Health Service and Maj. Robert Traub and Lt. Herbert L. Ley of the Army's Research and Graduate School.

All 40 of the scrub typhus patients treated with the new drug recovered. So did all 11 typhoid fever patients, though two of these were so sick, with hemorrhages and perforated intestines, that by all the previously known odds they should have died.

The discovery of the drug's effectiveness as a typhoid remedy was made by accident. In the early stages, scrub typhus cannot always be diagnosed exactly. So two patients thought to have this Pacific disease were treated with chloromycetin before the doctors could know that actually they had the entirely different typhoid fever.

Chloromycetin was obtained in crude form, from a mold in soil from Caracas, Venezuela, by Dr. Paul Burkholder of Yale. Scientists at Parke, Davis and Co. worked with it and obtained it in crystalline form. They are so far the only company making it and they have only made it on a laboratory scale for preliminary testing. Recently Dr. Smadel asked for three more ounces to send to Kuala Lumpur to finish the trials there.

The company said it had none left. Then after quite a search the three ounces were found in a chemical laboratory awaiting analysis. This precious last bit was sent to Malaya.

There won't be any more, Dr. Smadel was assured, until fall or early winter, by which time larger-scale production will be under way. Then there should be enough for further research and for treatment of a limited number of scrub typhus patients in Malaya and typhoid fever patients in the United States. Recalling the long periods before penicillin and streptomycin became available, Dr. Smadel considers the promise of a fall supply a remarkable achievement.

International goodwill note: Dr. Smadel stressed the excellent cooperation from not only British scientists at the Institute for Medical Research, Kuala Lumpur, but also that from the Malayan government. The government, he reported, returned to his unit the 70 cents per gallon gasoline tax on all gas the unit's two jeeps used, besides giving other assistance.

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MEDICINE

Polio Clues in Environment

➤ TO FIND new clues for solving the polio problem, look into the way of life, the soil, water, diet and other factors of the environment. Do this in regions of the world that have had very little infantile paralysis for several decades.

Something as useful for polio fighting as the discovery of the relation between fluorine in drinking water and tooth decay might be turned up from such a systematic search.

This, in brief, is the advice given the world's polio fighters by Dr. Albert B. Sabin, University of Cincinnati, at the opening of the First International Poliomyelitis Conference in New York.

Infantile paralysis, as it used to be called, is becoming "less and less infantile in many parts of the world," Dr. Sabin found in one of the most complete international surveys of the disease.

In 1916, 3.7% of polio victims in cities in the United States were over 15 years of age. Today, 25% are over 15. More than half (53%) of cases in Copenhagen in 1944 were over 15.

The theories that improved sanitation and resistance acquired through unnoticed exposure to the disease explain the change in age at which it is attacking are pretty well debunked by Dr. Sabin's analysis. So he suggests looking for more subtle factors in the environment.

The total amount of polio has probably not increased in the past 30 years in cities in the northern part of the world, Dr. Sabin said. The attack rates for the entire United States show no sign of a progressive increase from 1915 to 1939. And although there seems to have been more polio each year since 1940, the attack rate each year would not be higher than in the 1915-1919 and 1930-1939 periods if only paralytic cases were included. Probably 40% of the cases reported each year since 1940 are not paralytic, Dr. Sabin said.

Even without taking this into account, there is no sign whatever that the total amount of polio in New York City has been increasing in the past 30 years. In fact, if the reports are reduced by 40%, to make them comparable to 30 years ago when only paralytic cases were recognized, the overall risk of getting polio in New York has decreased since the 1910-1919 period.

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AERONAUTICS

Interchangeable Hulls Tested on Flying Boat

➤ INTERCHANGEABLE test hulls on a light-weight Naval amphibian plane are undergoing extensive flight and landing operations to determine which is best, particularly for use in rough water.

The tests are being made with a Navy Grumman J4F Widgeon, which has been modified so that the lower part of the hull on which it floats can be removed and replaced easily with other hulls of special designs by the use of bolts.

Present plans call for the testing of three different hulls which have been constructed as a result of research findings by the Stevens Institute of Technology, Hoboken, N. J., the National Advisory Committee for Aeronautics, Langley Field, Va., and the Glenn L. Martin Company of Baltimore.

The first hull to undergo rigid testing will be the elongated type now on the new Navy Martin XP5M-1, a patrol plane. The most striking feature of this is the length of its so-called afterbody. By extension of the hull bottom to the extreme end of the plane, a much longer base is provided which seems to lessen pitching and bouncing in rough water, protects the tail surface from waves, reduces the normal time and distance for takeoff, and makes landings less hazardous.

The hull being used on the Widgeon is a scaled-down reproduction of this Martin afterbody type. The second and third hulls to be tested will be the planing-tail type, designed by the National Advisory Committee for Aeronautics.

The plane for use with the various hulls has already been dubbed the "Petulant Porpoise."

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