MEDICINE

Polio Checked by Drug

This chemical, belonging to the sulfa drug family, may herald the conquest of virus diseases among which is the common cold.

➤ THE chemical conquest of virus diseases, which range from the common cold to encephalitis, or sleeping sickness as it is called, is heralded by the discovery of a chemical that stops infantile paralysis.

A number of polio victims are said to be walking around today, thanks to the chemical, called phenosulfazole, with tradename of Darvisul, instead of being paralyzed and crippled for life. The drug has been given to more than 70 patients already this season and several hundred will probably get it within the next two months.

The chemical is a modified and very peculiar and interesting sulfa drug. It was developed by Dr. Murray Sanders of Columbia University College of Physicians and Surgeons and eight chemists of Lederle Laboratories.

First trials of the drug started on patients in Texas this summer, after extensive studies with mice and monkeys showed what it could do and that it was non-toxic and therefore safe to use.

Just how many cases have been aided by the drug in the Texas trials will need to be determined by exhaustive tests upon the patients who seem to have had beneficial effects from the drug.

There is plenty of the drug. It is being supplied to physicians provided they can give reasonable assurance that they can accurately study the patients. This is necessary with any new drug while proper dosages are being worked out. Dr. Sanders feels now that some patients should be treated more vigorously than others. But this type of knowledge could not be gained without the trials now under way.

Besides the problem of dosage, there is another reason for being careful that the drug goes only to responsible persons. This is that otherwise many patients who did not have polio might get it, instead of getting some medicine they did need.

Dr. Sanders and Lederle had hoped to have news of the drug reach physicians through regular scientific channels before it became public knowledge but this was prevented by premature reporting. His work was not done under a grant from the National Foundation for Infantile Paralysis, and was not reported to the recent International Poliomyelitis Conference.

There does seem to be a good chance that due to the public attention focused upon this new chemical agent, even prior to scientific publication, more doctors will join those now evaluating the drug clinically.

Formal statements about the results will continue to be withheld until later. The drug is reported to be in ample supply and there is a polio epidemic. For these reasons, more progress in testing the new treatment will be made in the coming weeks than otherwise would be the case.

Meanwhile with an infantile paralysis epidemic in Texas and North Carolina and possibly spreading elsewhere, facts about this important advance have been obtained and reported by Science Service.

There have been some failures with the drug. If motor nerve cells have been destroyed, the drug cannot be expected to restore them. But it can stop the progress of the infection to more nerve cells and can prevent deaths from polio.

The unique feature of the drug, that it can stop a virus disease, gives hope that this or other drugs can be made to stop other virus diseases.

Full details about Darvisul are now scheduled for reporting at a New York Academy of Sciences conference on Aug. 23.

Science News Letter, July 31, 1948

METEOROLOGY

Prevent Spread of Gases

➤ TWO WEATHER observation towers to provide information which will guard against the spread of radioactive gas are nearing completion at Brookhaven National Laboratory in Upton, N. Y.

The purpose of these towers is to permit study of wind currents so that radioactive gas can be prevented from spreading from the nuclear reactor or chain reacting pile which will be finished this fall.

The nuclear reactor will be cooled by air. Contaminated air will be conducted away from the pile by large fans and sent through an air duct and up a 300-foot stack on a nearby hill. This air will contain minute quantities of radioactive argon gas. Study of wind velocity and direction, and atmospheric pressure from the towers during operation of the pile will make it possible to control the pile so that the radioactive gas will be sent up into the upper atmosphere where it can do no harm and not settle near the ground. If weather conditions are unfavorable the

LEDERLE LABORATORIES—Two new drugs have recently come from here—the anti-polio chemical, phenosulfazole, which may prove effective against other virus diseases, and the antibiotic, aureomycin, which may check diseases not touched by either penicillin or streptomycin. (See p. 69). This is an aerial view of the laboratories in Pearl River, N. Y.

nuclear reactor will be stopped.

The design of the observation towers was supervised by the Brookhaven Meteorology Group, headed by Norman R. Beers. Working with the group is a special station of the U. S. Weather Bureau, headed by Raymond C. Wanta.

The taller of the two towers, which is to be 420 feet high or as tall as a 35- or 40-story building, will be the tallest structure on Long Island, laboratory officials believe. It is to be completed soon. The second tower, 160 feet high, is already complete. There will be platforms, five on the small tower and eight on the large one, where observers can take readings from weather-recording instruments.

Weather instruments on the towers will be mounted on beams which can be swung away from the towers and then pulled in for observation. In addition, weather observations will be recorded electrically on an instrument panel in a building 900 feet away from the towers. The building has to be this far away from the towers so that eddies created by winds passing over the building will not disturb observations made by instruments on the towers. Two electrified cables between the towers will carry instruments to record temperature and wind differences between them.

Another feature of the tall weather tower will be a smoke stack which will carry only smoke created for the purpose of studying wind and weather. This is a 20-inch steel pipe running the height of the stack, and it will give off smoke produced by a surplus Army M-1 smoke generator, similar to those used in spreading smoke screens.

Science News Letter, July 31, 1948

Science Service Radio

➤ LISTEN in to a discussion on thunder and lightning flying on "Adventures in Science" over the Columbia Broadcasting System at 3:15 p.m. EDST Saturday, Aug. 7. Maj. Gen. H. M. McClelland of the Military Air Transport Service, Gravelly Point, Va., as the guest of Mr. Watson Davis, director of Science Service, will tell the hazards of flying in thunderstorms and of the project the Air Force and Weather Bureau were working on together.

Science News Letter, July 31, 1948

Letters To The Editor

Up-To-Date Matter

My appreciation for "Laws of Matter" (SNL, June 19). Many of us needed this to bring us up-to-date.—Ralph C. Max, D.D.S., Hartville, Mo. *We're planning to do this for other fields, thanks.*

Gained Inspiration

I have read "Nature Ramblings" pretty regularly for about five years and have enjoyed them all, but the one on "Force-of-Habit Farming" (SNL, July 10) really stirs me up to want to do something about it.

I am not a farmer. I am a retired physician with gardening as a hobby, but I have a hunch that you have given me the idea I have been needing.—Walter Rittenhouse, San Diego, Calif.

We are glad that it stirred you to thoughts of trying to make your San Diego County hillsides pay for their keep. If they can be induced to yield something good for food, either directly or via the medium of some food animal, there surely will be hope for more fertile, better watered hillsides elsewhere!

Why The Patient?

I can't refrain from commenting on the article entitled "X-Ray Photos by Wire" (SNL, July 3). Would it have taken a master mind to think of transporting the pictures in question to the nearby large city instead of the patient? I assume that the small town hospital had at least a telephone so that the large city radiologist could have phoned back his findings on receipt of the pictures.—Joseph G. Landauer, Hollywood, Fla.

The method was developed to do just that—transport the pictures rather than the patient, and in a minimum of time.

Question Box

ARCHAEOLOGY

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What signs of violence have been found in ancient Sinai? p. 78

GENERAL SCIENCE

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MEDICINE

Against what germs is the new antibiotic effective? p. 69

What new drug may herald the conquest of virus diseases? p. 67

MEDICINE-PHYSICS

What weapon will be used in the new attack on cancer? p. 79

METALLURGY

How will ceramic coatings make more dependable jet and rocket engines? p. 70

METEOROLOGY

How will the spread of radioactive gas be prevented? p. 67

PHYSICS-ASTRONOMY

What is the latest theory on the evolution of the universe? p. 71

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