MEDICINE

Shots of Drugs "Aimed"

The same drug can be directed to any organ needing the treatment by "aiming" it. Particles are the right size for cells. TB treatment hinted.

➤ AN "AIMED SHOT" method of giving drugs with a hint that it may provide a method of treating tuberculosis, is being reported by Dr. Rudolf Degkwitz, of the University Children's Clinic, Hamburg, Germany, at the meeting in New York of the Fifth International Congress of Pediatrics.

By "aiming" the injections, one and the same drug can be directed exclusively either to the spleen, liver, lungs or bone marrow, according to need. The trick seems to be having the drug in such physical form that particles of it are the right size and shape to be taken up by the cells of the sick organ.

Aniline dyes dispersed in the form of very small spherical particles in water were injected into guinea pigs infected with tuberculosis. With weekly injections, the animals survive after six to seven weeks of treatment, Dr. Degkwitz reported, while untreated control animals die within this period of time.

Examination of tissues or single cells by means of polarized light, which showed crystalline or crystalloid structures within the cells, apparently gave the clue to the "aimed" injection method of treatment.

A particular group of compounds, water-soluble fats, within the protoplasm of cells, Dr. Degkwitz found, apparently favors crystallization while another group, water-soluble sugars and proteins, prevents crystallization.

With the aid of these two antagonists, spheres, needles, flakes and fibers of well-defined diameters may be produced from the same drug in the test tube by first allowing it to crystallize and then interrupting crystallization after a certain time.

When a drug is injected into the blood stream, spheres and particles of a certain diameter will be taken up in the liver, spleen or bone marrow. Needle-shaped particles with longitudinal diameters similar to red blood cells will remain in the lungs. Spherical particles injected into cavities (abdominal or pleural) will be transported by the lymphatic vessels and will accumulate in the lymph nodes.

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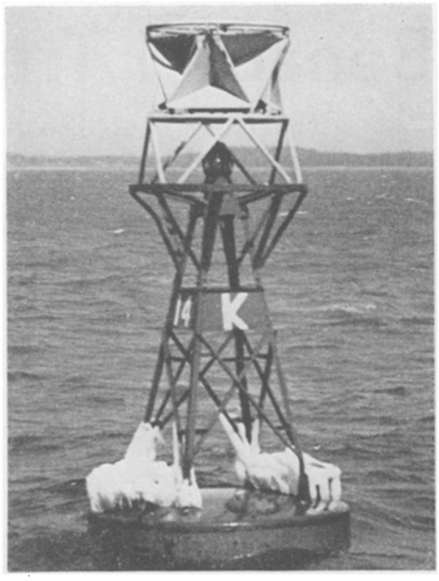

REFLECTORS ON BUOYS — A buoy wearing a radar reflector can be picked up by the ship's radar at twice the distance than when the buoy alone is the target.

MEDICINE

Synthetic Cheer-Up Drug

➤ NEW MEDICAL weapon in the fight against mental sickness is a synthetic cheer-up drug that lifts patients out of depressions. Its use in 50 patients of whom 36 showed definite improvement is reported by Dr. G. Tayleur Stockings, Ernest Hart Memorial Scholar of the British Medical Association.

The drug is called synhexyl. It was synthesized by an American chemist, Prof. Roger Adams of the University of Illinois. Similar chemicals have been synthesized by Prof. A. R. Todd of Cambridge University and the Roche Research Department in England.

Synhexyl, also known as pyrahexyl, or parahexyl, is somewhat like cannabis, the drug extracted from the hemp plant. Under the name of hashish, cannabis has figured in romantic tales of the East throughout history.

As a cheer-up drug, which doctors call a euphoriant, synhexyl is more powerful, weight for weight, than cannabis, Dr. Stockings found from experiments on himself and a group of normal persons.

It is not very powerful as a painkiller but under its cheering influence, patients were less disturbed by their aches and pains.

"An extremely promising" remedy but not a "permanent cure," is Dr. Stockings' verdict on the drug after trying it on patients. It is not a cure because its effect is not lasting and it must be given every day.

The patients took the drug in a capsule first thing in the morning before breakfast. The patients who were helped by it said they felt brighter, more cheerful and more confident. They showed more initiative and interest in work or other activities. Some had already had electroshock treatments without being helped by them.

Inert, control capsules of exactly similar appearance did not have any effect on the patients, thus ruling out the possibility of the improvement being due to suggestion. Bad side effects from the drug were at a minimum and Dr. Stockings believes the drug could be given to patients who are not in a hospital.

U. S. Doctors Fear Hazards

Giving synhexyl, or parahexyl, to patients not in hospital would be completely contrary to the experience doctors at the U. S. Public Health Service Hospital in Lexington, Ky., have had with it. This hospital, popularly known as the "narcotic farm," has been carrying on extensive studies of morphine and many other drugs that might cause addiction.

"In a certain proportion of patients parahexyl sets off an acute, excited, temporary psychotic (insane) condition," Dr. Victor Vogel, director of the hospital said.

"It should therefore be given under closely controlled conditions."

Doctors here are not familiar with its use for treatment of depressions.

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