

MEDICINE

Sulfapyridine And Heparin Save Heart Disease Patients

Pneumonia Remedy and Blood Clotting Substance Combine to Rescue Patients Almost Certain to Die

PATIENTS doomed to an almost certain death from one kind of heart disease may be rescued by a new treatment which uses two of medicine's newest disease-fighting weapons. They are sulfapyridine, famous chemical remedy for pneumonia, and heparin, anti-blood clotting substance that has also recently reached the stage of practical application as a life-saver.

Seven patients with bacterial endocarditis due to the *Streptococcus viridans*, almost invariably fatal heart ailment, were given the new treatment by Drs. Saul R. Kelson and Paul D. White, of Boston. Three of the patients recovered; two of these have since remained well for from one to more than five months, they report. (*Journal, American Medical Association*, Nov. 4); the third case died of a different disease six months after the treatment and autopsy showed that the heart lesion due to the bacterial endocarditis was completely healed. The other four patients were unable to take the treatment long enough to be helped by it and three of them died.

The new treatment, Drs. Kelson and White state, "has in these first few months given more promise than any other method that we ourselves have used or heard of in the past."

They warn that the treatment is still in the experimental stage, that it should not be tried unless the doctor can watch the patient closely and is certain of the diagnosis, that it can do harm, but conclude "the possible benefit may well outweigh the risks, we believe, in this almost universally fatal disease."

This kind of heart disease is due to germ infection. The germs grow on the lining membrane of the heart in such a location that they are protected from the body's own germ-fighters in the blood. There is no way of increasing the number of these germ-fighters nor of getting them into closer contact with the germs, nor of dissolving the growth clumps of germs and fibrin from the blood.

The double-barreled action of the new treatment, however, seems to solve the

problem. The sulfapyridine checks the growth of the germs, if it does not kill them outright. The blood-clot dissolving heparin can, it is believed, prevent further development of such clumps by reducing the ease with which the blood clots. It may also prevent the dangerous condition of an artery becoming plugged by one of the germ-blood clumps that so often gets free from its location on the heart, and it can check the growth of more of these vegetations, as they are called.

The idea of using heparin to treat this condition also occurred to another group of physicians who report in the same issue of the *A.M.A. Journal*. These men, Drs. Meyer Friedman, of San Francisco, and W. W. Hamburger and L. N. Katz, of Chicago, gave heparin without sulfapyridine to one patient. Unfortunately the man died of brain hemorrhage before treatment had been continued long enough to know whether it could help.

Sulfapyridine and sulfanilamide have both previously been tried in this fatal heart disease, with a few cases of recovery.

Science News Letter, November 18, 1939

GENERAL SCIENCE

Americans Spend Little For Their Education

IT IS always surprising how people spend their money. Here is the order of income usage revealed in the highly informative report on consumer expenditures in the U.S.A. just issued by the National Resources Planning Board: Food, 29%; housing, 16%; household operation, 9%; clothing, 9%; automobile 6½%; medical care, 4%; recreation, 3%; personal care and tobacco, each about 2%; transportation, 1½%; education, less than 1%, ranks last except for a few miscellaneous items. Thus about 85% of the \$59,300,000,000 income in 1935-6 was spent for current consumption, 10% was saved, 4% given away to relatives, friends, churches, philanthropies, only 1½% as income and other personal taxes.

One-third of the Nation's 39 million families and individual consumers have incomes less than \$780. The middle third received between \$780 and \$1,450. The top third varied from \$1,450 to over a million! The lower one-third spent \$7,000,000,000 on current living expenses, 14% of the total consumption outlay, with only \$6,000,000,000 covered by current income and \$1,000,000,000 from previous savings, loans from relatives, credit at stores, etc. The 178,000 consumer units with incomes of \$15,000 or over devoted less than 40% of their incomes to consumption purposes. This top one-half of 1% of the nation received nearly 10% of the \$59,000,000,000 consumer income in 1935-36, almost as much as the whole lower third.

Expenditures for medical care, \$2,200,000,000 or slightly less than 4% of the total, covered only a little over three-quarters of the total medical bill of the nation. The remainder is met by free services supplied by public and private agencies. Education expenditures, just over \$500,000,000, covered only a sixth of the total educational outlay of the nation, the most being met by public and private schools.

The auto is the predominant mode of transport. Almost 6½% of the total consumer income was given to the family car; only 1½% to all other kinds of transportation combined, streetcar, subway, taxi, bus, railroad, steamship, airplane, motorcycle, rented automobile, horse-and-buggy. Total cost for autos is \$3,800,000,000.

Science News Letter, November 18, 1939

OCEANOGRAPHY

Newly Discovered Mountain Is Climbed Only by Fish

DISCOVERED: New mountain, nearly two miles high, guaranteed by the U. S. Coast and Geodetic Survey. Only fishes can climb it because it is underwater in the Gulf of Alaska 200 miles south of Kodiak Island. Its top is 4,700 feet deep. Usefulness of this discovery by U. S. survey ship *Surveyor*: Underwater landmark useful in navigation, since fathometer, echo sounding apparatus, can spot submarine peaks while ship is cruising full speed ahead. It would be equally as valuable as a landmark ashore.

Science News Letter, November 18, 1939

Mesh turbans, much like those worn twisted around the head by women today, were popular in Egypt 1,500 years ago.