

MEDICINE

Report Heart Research

Current research reported to scientists at the American Heart Association meeting ranged from anticoagulants to surgery.

CHILLED BLOOD sent through the coronary arteries will cause the heart to come to a complete temporary standstill, enabling cardiac surgery to be performed more easily.

The procedure was described at the scientific session of the American Heart Association in Philadelphia by Dr. Vincent L. Gott of the University of Minnesota Medical School. During the past year, he said, patients' hearts had been stopped for 45 to 60 minutes by chilling their blood supplies to 62 degrees Fahrenheit or below.

The resulting heart stop allowed surgeons to operate on an immobile and dry heart while heart-lung machines maintained circulation to the rest of the body.

Since 1957 surgeons have been able to stop the heart with drugs. The heart starts again when normal circulation is restored and the returning blood washes out the drug.

The use of chilled blood to stop the heart offers several advantages over the drug method, according to Dr. Gott. Cold blood can be sent through the heart muscle from time to time as desired. This prevents oxygen "starvation" of the heart muscle and minimizes undesirable changes in the chemistry of the heart.

The new method makes it possible, Dr. Gott said, to still the heart for a much longer period of time than is usually considered safe with drugs.

Anticoagulants Affected

BARBITURATES, widely used in sedatives or sleeping pills, can interfere with the action of anticoagulant drugs often prescribed to help ward off blood clots in patients with heart or artery disease.

If barbiturates are taken before anticoagulants, the anti-clotting drugs lose their effect, Dr. Murray Weiner of New York City told the Heart Association.

Studies in both animals and humans, he said, showed that the barbiturates apparently prevent the anticoagulants from being absorbed. When sedatives or sleeping pills were given five hours after the anti-clotting drugs, however, this inhibiting effect was not seen.

Too Much Adrenalin

COMPETITIVE, "hard driving" men apparently may get heart disease earlier and oftener than more relaxed persons due to an over-secretion of adrenalin, Dr. Meyer Friedman of San Francisco reported.

Dr. Friedman, a proponent of the theory that "go-getting" men are more likely to

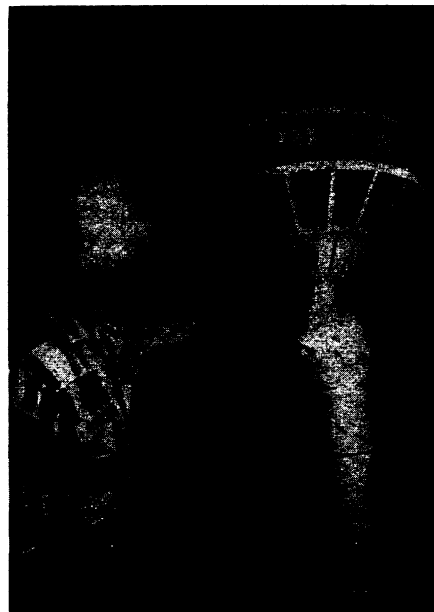
suffer heart attacks than others, told the Association that he found the adrenal glands of "hard drivers" apparently produced more adrenalin and a closely related hormone, noradrenalin, during the working day than the glands of a comparable group of easy-going men.

Studies have shown that men of aggressive behavior patterns had "six to eight times" as much heart disease as those with relaxed personalities. Excessive production of these two hormones during working hours suggests a mechanism through which the personality factor may operate, he said.

Blood Fat Level

HEREDITY is a more important factor than environment in determining the level of certain blood fats sometimes associated with heart disease.

A study of 2,500 persons living in "highly urban" Manhattan and "semi-rural" Staten Island, two different environments, revealed "strikingly similar" average blood cholesterol levels among the residents of both



EXPLORER VII—One of the scientists inspects the satellite on the fourth stage of rocket prior to the launching of the Juno II rocket carrying Explorer VII, with a 91.5-pound satellite into orbit. The launching was under the direction of the National Aeronautics and Space Administration, at Cape Canaveral, Fla. (See p. 301.)

areas. Similar levels within family groups in both areas were also found, providing evidence of a genetic link.

Cholesterol is a fatty substance found in many foods and also manufactured in the body. It is viewed by many doctors as a cause of narrowing and hardening of the arteries.

Other physicians point out that this hypothesis has not been proved.

Results of the study were reported to the American Heart Association by Drs. Louis E. Schaefer, David Adlersberg and Arthur G. Steinberg of New York City.

Operation Cures

AN OPERATION that can cure a condition usually fatal in more than 75% of cases was described to the American Heart Association.

The condition is dissecting aneurysm of the aorta, and occurs when the inner lining of this main artery carrying blood from the heart becomes torn, permitting blood to leak between the inner and outer walls of the vessel. In some cases the condition is naturally alleviated, but in approximately 75% of cases the weakened wall ruptures, causing the patient to bleed to death internally.

Until five years ago, treatment of this condition was unsatisfactory, Dr. Michael E. De Bakey, Baylor University College of Medicine, Houston, Texas, reported. Since then, however, he and his associates have operated on 48 persons with dissecting aneurysms, cutting out the affected section of the aorta and replacing it with a blood vessel graft.

New Blood Dissolver

PAIN, DISABILITY and death resulting from blood clots in the extremities may be reduced significantly by the use of a new clot-dissolving agent.

The drug, a form of human fibrinolysin, was used by Dr. Kenneth M. Moser of the Georgetown University Medical Center, Washington, D. C., to treat a group of patients suffering from severe thrombophlebitis (clotting of veins in the arms and legs). The results of the study were reported to the Heart Association.

The study was made on 62 patients, 30 of whom were given standard anticoagulant treatment and 32 of whom were given fibrinolysin in addition to the standard treatment.

The standard-treatment group suffered pain 76% longer, edema 50% longer, and were bedridden 40% longer than those treated with fibrinolysin.

No toxin reactions to the fibrinolysin infusions were reported, except for a temperature rise in about half the patients. These reactions were treated by aspirin and antihistamines.

Participating with Dr. Moser in the study were Drs. George C. Hajjar and Stephen B. Sulavik of Washington, D. C.

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