MEDICINE

Modern Balm for Hearts

Alcohol is now prescribed, not to drown grief, but to ease burden on overtaxed heart. Quinidine, digitalis, procaine and ACTH are other aids to faltering hearts.

By JANE STAFFORD

➤ THIS is the time of hearts—St. Valentine's Day and romance symbolized by conventional hearts pierced by cupid's arrows. Life-saving medical research on illnesses connected with the human heart are even more important. There is hopeful progress that will "lift up our hearts."

Lace-edged valentines suggest bygone days when love-sick swains sang sentimental ditties about broken hearts. And when rejected suitors drowned their grief in alcohol.

Today alcohol is likely to be used as heart balm by the middle-aged executive whose doctor has prescribed it in moderation to ease the load of an overtaxed heart.

The reason for prescribing a mild cocktail or highball at the end of the day is because of the alcohol's effect in dilating small blood vessels. When the walls of these vessels thicken and harden, as they do in arteriosclerosis, or hardening of the arteries, the bore of the vessels is narrowed. Then the heart must work harder to pump blood through to all parts of the body.

Balm for damaged hearts today includes such other drugs as quinidine, digitalis, procaine and that very new medical aid, ACTH.

Household Word

Those four letters, ACTH, short for adrenocorticotropic hormone, have become a household word in thousands of homes during the past year and a half. The hormone comes from the pituitary gland, powerful organ buried at the base of the brain. It first gained fame for its ability to relieve pain-stiffened and crippled joints in arthritis, or rheumatism.

Beneficial effects in rheumatic fever were next chalked up to its credit and now this powerful hormone drug seems likely to save children and young people from the worst effects of rheumatic fever, rheumatic heart disease.

Early treatment of acute rheumatic heart disease with adequate amounts of ACTH should shorten the course of the disease, reduce heart damage from it to a minimum and prevent death due to progressive heart damage, two New York doctors have just declared. They are Drs. May G. Wilson and Helen N. Helper of the New York Hospital and Cornell University Medical Center.

This opinion, which seems to foretell the conquest of the greatest disease killer of children and young people, is based on results in young patients treated with ACTH. The hormone chemical stopped the signs and symptoms of progressive acute rheumatic heart disease in every one of 11 consecutive patients.

The good results were obtained within three to seven days. The patients were able to be up out of bed and walking about within two to four weeks. In five of the patients there was no further sign of increased heart damage when the patients were examined four to 12 months after treatment. In six patients treated during what was presumed to be their first attack, there was no sign of heart damage in two and doubtful sign of it in three at the examination four to 12 months after treatment.

Treated Early

The fact that these patients were treated early in the attack of acute heart trouble is considered significant. Heretofore the effects of ACTH in rheumatic fever have been observed in patients who had been sick for several weeks before ACTH treatment was started. The effects of the hormone chemical in stopping the heart damage therefore could not be determined too well.

Procaine, synthetic pain-killing chemical most familiar as the local anesthetic used by dentists, is now being used to make hearts less irritable. During operations on the heart, such as the famous blue-baby operation, the surgeon sprinkles procaine directly on the heart so that it will tolerate better the handling it must get during the operation. In some cases, the surgeon may prefer to inject a solution of the chemical into the veins and let the blood stream carry it back to the heart.

The word heart comes from a Greek word meaning quivering or shaking. Normal hearts quiver or shake in a steady rhythm, usually called a beat. In some heart troubles, the rhythm is upset, different parts or even different fibers of the heart muscle quivering independently of each other. Balm for some cases of disordered heart rhythm is quinidine. This chemical is a relative of the old anti-malaria drug, quinine. Like quinine, quinidine comes from the bark of the cinchona tree.

To make hearts beat more strongly as well as in better rhythm, doctors use a different kind of medicine, digitalis from the foxglove plant.

And to prevent one kind of heart break, there is penicillin. Because hearts do occasionally break, though not from romantic disappointment. When the spirochete of syphilis invades the wall of the aorta, the great blood vessel leading from the heart, it damages the wall so that it gets thinner and thinner. Pressure of the blood being continually pumped through it further weakens the wall until it bulges and may finally rupture, or break. Prompt, adequate treatment of syphilis, now easily accomplished with penicillin, lessens this danger or abolishes it.

Medical scientists are working hard to find even better ways of helping the 9,000,000 men, women and children in the United States who have heart disease and the millions more in other parts of the world with such afflictions. New operations to correct inborn defects of the heart have been developed. Penicillin and other medicines can now stop many germ diseases that affect the heart. A new machine has been invented that may make possible mass examinations to detect early heart trouble. All these give hope that future millions may be spared heart crippling and premature heart death.

The search for more knowledge of heart disease—causes, prevention and treatment—was given added impetus within the past four years. This came through establishment of the National Heart Institute in the U. S. Public Health Service, and by development of the American Heart Association into an organization of doctors and laymen for an aggressive attack on the disease.

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BIOLOGY

Streptomycin Decomposed By Bacterial Action

➤ STREPTOMYCIN, contrary to general opinion, can be decomposed by microorganisms though it is more resistant to such decomposition than penicillin and other antibiotics.

A bacterium that can do the job of decomposing streptomycin has been discovered by Drs. David Pramer and Robert L. Starkey of Rutgers University and the New Jersey Agricultural Experiment Station. (SCIENCE, Feb. 2).

This particular bacterium is a rod-shaped one that produces a greenish-yellow color when grown on agar.

While streptomycin is being decomposed, volatile material having a characteristic pungent odor suggestive of malt and the old-time asthma inhalant, pyridine, is produced.

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