

medical sciences notes

DWARFISM

Pituitary Glands Needed

A type of dwarfism caused by insufficient secretion of human growth hormone (HGH), produced by the pituitary gland, affects an estimated 5,000 to 10,000 children in the United States. They can be helped if sufficient HGH is obtained from glands willed for research.

The National Pituitary Agency, originally affiliated with Johns Hopkins University, is now operating with the University of Maryland School of Medicine, which has just received a contract for \$287,500 from the National Institute of Arthritis and Metabolic Diseases, Bethesda, Md. The award will be used to improve and increase the collection of human pituitary glands of deceased persons, and to provide for the distribution of purified HGH to qualified research scientists.

Research is being done with some 400 children who are being given HGH; many of them show remarkable results. One boy grew almost four inches in eight months of injections. Such clinical studies are aimed at determining HGH's metabolic effects and mechanism of action.

Biochemical research emphasis is on an analysis of the detailed molecular structure of HGH to make possible its synthesis and eliminate reliance on the hard-to-obtain natural human hormone.

ANEMIA

Camels to Aid Blood Studies

Australian researchers are planning to analyze the milk of camels for folic acid content in an attempt to understand why nomads who drink camel's milk are relatively free of anemia, while drinkers of goat's milk are not.

Folic acid, a widely distributed vitamin (designated variously B₉ and M) promotes the formation of blood cells in certain types of anemia. It is believed to be lacking in goat's milk. There is a prevalence of anemia among tribes in the Middle East who keep goats.

State workers, who are destroying wild camels in the Port Hedland area of northwestern Australia, are being asked to milk the animals, put the milk in a vessel containing preservatives and send it to the department of hematology at the Royal Perth Hospital.

ANGINA PECTORIS

Electronic Device Alleviates Pain

The staggering heart pain of angina pectoris can be alleviated by a surgically implanted electronic device.

The technique was used by a team of doctors at the National Heart Institute, Bethesda, Md., on two middle-aged men who had had to stop nearly all physical activity. Allowing such activity may encourage the development of new blood channels to blood-starved areas of the heart.

The researchers, headed by Dr. Eugene Braunwald, implanted a device that stimulates the carotid sinus nerves high up in either side of the neck to reduce blood pressure, thus reducing both the work of the heart and its oxygen requirements.

The electrical stimulus is generated by a small transmitter worn outside the body. It is transmitted by a wire to a light-weight disk-shaped coil, beamed through the intact chest wall to a receiving unit implanted just under the skin, and finally carried by way of wire electrodes to the carotid sinus nerves.

The typical treatment for angina pectoris either increases coronary blood flow, thus bringing more oxygen to the heart, or decreases the heart's need for oxygen. In the cases now reported, however, increasing blood flow was not the solution because both men had hardening of the arteries that limited the ability of their coronary arteries to dilate and thus carry more blood. Drugs to reduce oxygen requirements acted too slowly and incompletely in these patients.

TISSUE TYPING

Kidney Transplant Has Good Chance

What is believed to be the first kidney transplant to have been made after tissues of both the recently dead donor and the recipient had been completely typed and found unusually compatible gave a 20-year-old New York woman a good chance of retaining the organ.

Sylvia Szlak of Lower Manhattan was "doing splendidly" 11 days after receiving the graft from an unrelated 45-year-old woman who died Dec. 22 in Bellevue Hospital following a stroke.

Dr. Felix T. Rapaport of the New York University School of Medicine headed a team of five surgeons in making the transplant after tissues had been tested for four hours.

A transplant has its best chance of surviving when the tissues of donor and host are similar, as they are in close relatives or, better still, in identical twins.

CANCER DETECTION

Kit Approved to Find Malignancy

The possibility of detecting lung cancer in its earliest, most curable stage is seen in the introduction of a "cytec sputum collection kit," the American Cancer Society's New York City division declares.

Nuclear Research Associates of New Hyde Park, L.I., N.Y., is ready to market the kit, to which the Food and Drug Administration has made no objection. The kit includes a solution to preserve deep-cough sputum cells for microscopic examination in the laboratory.

A user would get the kit from his private physician, a hospital, union or company medical department. Then he can collect early-morning deep-cough sputum samples in the kit, which resembles a test tube. The kit can then be returned to a physician or mailed to a cancer detection laboratory for pathological analysis.

Collecting of cells, which come from the lining of the bronchial tubes, for microscopic examination makes the new system for lung cancer comparable to the Pap test for early detection of uterine cancer.

Dr. S. B. Gusberg, president of the Cancer Society's New York division, says if the smoking and health committee, chaired by Dr. Emerson Day, finds the data on the kit conclusive, mass screening programs will be considered for early lung cancer detection in New York City.

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