MEDICINE

To Use Mechanical Hearts

➤ A LARGE-SCALE PROJECT to save heart attack cases from death by putting them on a mechanical heart until the danger period is passed was disclosed to members of the New York Heart Association's annual science writers' tour in New York.

The project is being started at King's County Hospital, Brooklyn, under the direction of Dr. Clarence Dennis, a pioneer worker with the heart-lung machine, and his associates at the State University of New York College of Medicine.

The heart-lung machine to be used was developed by Dr. Dennis and takes over the job of both breathing and pumping blood for the body. For heart attack cases, the apparatus will take blood from a vein in the patient's leg, supply it with oxygen, and return it through an arm artery in a steady circulation. The machine will take over about one-third of the entire pumping burden of the heart.

The procedure will be used only on patients who have had at least one previous heart attack, with damage to the heart muscle. When these patients have another attack involving a large part of the heart muscle and causing shock, they usually die. About five such patients are admitted to the hospital weekly, and the new technique will be used to keep them alive while their hearts heal.

This "partial perfusion" of blood by the machine will be given for many hours, perhaps six or eight, until the crisis of an attack is passed. Although the technique has been used successfully in a few isolated cases in the past, this is the first time it will be done on an organized scale.

A special "perfusion room" will stand ready for heart attack cases 24 hours a day and will have a panel of technicians, physicians and nurses on emergency call at all times.

The use of partial perfusion is primarily to save lives, Dr. Dennis said. But it could also be used to improve the condition of certain patients with heart valve diseases so that later repair operations could be performed, he added.

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HEART-LUNG DEVICE—Experimental heart surgery uses a disposable plastic bag, total cost under $20, which adds oxygen to the blood and removes dangerous air bubbles. Dr. Clarence Dennis at the State University of New York College of Medicine heads the project.

GENETICS

Create Monsters by Cross Breeding Mutant Chicks

➤ HOW nature produces freaks and monsters is being learned by breeding bizarre traits into chickens or by injecting their eggs with chemicals and creating a one-eyed cyclops or other abnormality.

Dr. Walter Landauer of the Storrs Agricultural Experiment Station, University of Connecticut, Storrs, Conn., created many types of weird monsters by cross breeding and interbreeding a group of mutant chickens which he first observed in 1945. Some of these animals had no lower backbone or tail, and were called "rumpless."

When these rumpless chickens were bred, nature went on a rampage and produced all sorts of strange alterations in their offspring. Some had tiny heads, single eyes or a fantastic number of toes. Others went through life seemingly normal, only to pass on strange characteristics to the next generation.

Some of the mutants were able to stay normal themselves because they possessed certain "modifiers" or groups of genes which overcame certain inherited defects, Dr. Landauer found. By breeding these modifiers out of the chickens he produced chicks extremely susceptible to chemicals that could induce monstrosity.

One of these chemicals is ethyl carbamate, a sleep-producing drug that induces cancer in some animlas. When injected into chick embryos, it produced chicks with defective beaks. It probably did this by disrupting the chemistry of a vitamin or some other appendage to an enzyme that governed beak formation, Dr. Landauer believes.

When mutations occur genetically, the principal part of an enzyme, the protein, is affected and alters the entire organism, he believes.

The research work has been supported by the American Cancer Society.

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PSYCHIATRY

PDQ Plan Tried With Mental Patients

➤ A NEW way to prepare hospitalized mental patients for their return to the outside world is being tried with a plan called PDQ at the Leech Farm Road Veterans Administration Hospital, Pittsburgh, Pa., the VA announced in Washington.

PDQ stands for Patient Discharge Quarters, and the plan sets aside a hospital ward for patients who have passed the acute stage of their illness but need from two to six months further hospitalization, Dr. Lee G. Sewall, hospital manager, said.

The ward is staffed by only one hospital official, Dr. John F. Muldoon, a counseling psychologist, and there are no physicians, nurses, aides or locked doors. The patients run their own community.

The ward is governed by a group of five patients who are elected once a month. This council deals with regulations, recreation and discipline, Dr. Muldoon said.

The patients either work in town, using the ward as their home, or work with the hospital staff. They get their own money at the end of the week and spend it as they see fit.

As a new departure in mental rehabilitation, the PDQ plan provides a basis for a research study of this kind of way-station in a mental hospital, Dr. Muldoon said.

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