

Medical Sciences Notes

HEALTH CARE

Mobile Unit Helps Hearts

The Royal Victoria Hospital in Belfast, Northern Ireland, is the first in the British Isles to use a "flying squad" ambulance to help patients who have just suffered heart attacks.

Dr. Frank Partridge, physician-in-charge at the hospital, designed the mobile unit so victims of coronary thromboses can be treated in the first dangerous hour following attack.

"Some 30 coronary patients whose hearts have stopped (one of them suffered heart stoppage 29 times in less than two days) have been resuscitated and discharged from the hospital," Dr. Partridge said. "Many have resumed their ordinary work."

The British Heart Association has just made a gift of \$6,400 to Belfast to provide another ambulance to help patients in Belfast, a city of about a half million population, and the Belfast City Hospital will join in operating the service.

BIOCHEMISTRY

Birth Defect Chemical

A chemical defect that reverses the gender of sexual organs in unborn children has been identified by scientists who hope to be able to correct birth defects in animals and eventually in humans.

Called congenital adrenal cortical hyperplasia, the defect causes males to become feminized and females virilized. However, the chemical imbalance does not lead to a complete sexual transformation but to a kind of gray area or neuter sex state.

The anomaly, which Drs. Allen S. Goldman, Alfred M. Bongiovanni and William C. Yakovac of the University of Pennsylvania School of Medicine have reproduced in rats, seldom occurs in humans. The doctors work has led to what may be medicine's first experimental model of an inborn error of metabolism. If they are successful in correcting the defect in laboratory rats by altering metabolism after birth, their success may lead to ways of helping some of the estimated 250,000 babies born every year with genetic and congenital conditions.

PUBLIC POLICY

Doctor-Merchants' Ethics Explored

Ten days of scheduled hearings on the ethics of physicians who profit from selling products they prescribe have left the fate of the new Medical Restraint of Trade bill open to question. The retail druggists support the bill but most doctors oppose it.

Although some physicians oppose the practice of a minority of their colleagues owning drug stores, the majority will do nothing to support regulatory legislation introduced by Sen. Philip A. Hart (D-Mich.).

As a side issue, the problem of generic versus costlier trade-named drugs crept continually into the testimony, with both the price and quality debated.

Sen. Hart has held hearings on the generic prescription controversy in the past, but has not pressed for regulatory legislation in this area.

RADIATION HEALTH

Dopamine Protects Mice From X-rays

Dopamine, a natural hormone, has been found to be radioprotective in laboratory experiments on mice.

When mice were injected with dopamine before x-irradiation, 80 percent survived exposure to 700 r whereas none of the control animals lived. Injection of the hormone after exposure had no protective effect.

Drs. Kedar N. Prasad and Melvin H. Van Woert of the University of Rochester and Brookhaven National Laboratory respectively reported their work in the Jan. 27 issue of *Science*. They believe it is the first evaluation of dopamine as a radioprotective substance.

Dopamine is the intermediate product in the synthesis of norepinephrine, a hormone secreted by the adrenal medulla and used physiologically in response to hypotension or low blood pressure. Norepinephrine itself is not radioprotective.

DENTISTRY

Plastic Tooth Implants

Promise for humans who have had trouble eating corn on the cob with the old-fashioned type of false teeth is held out by a report on plastic tooth implants.

Dr. Milton Hodosh, a dental surgeon of Brown University, Providence, R.I., who heads up a huge research project for the National Institute of Dental Research, Bethesda, Md., reports excellent results with a plastic called polymethylmethacrylate. Examinations have revealed no jawbone resorption or damage to gum tissues by implantation of the plastic tooth in baboons, in original sockets.

"If findings continue to be encouraging," Dr. Hodosh says, "we foresee the application of the plastic tooth implant to human oral rehabilitation."

Esthetically the teeth are satisfactory, and functionally they appear to work well.

CONTRACEPTION

Low-Dose Pill Being Tested

Scientists at the Rockefeller-supported Population Council expect to report the results of human testing of a low-dose oral contraceptive within the next two years. The low-dose pill contains only one-tenth as much of the hormone progesterone as pills now in use, and no estrogen at all.

Estrogen, a female hormone that induces cancer in laboratory animals, has been known to both speed up and slow down the growth of human cancers. It is often given to women at menopause with no apparent harm, though scientists do not know what effect, if any, estrogen might have on younger women taking it over a prolonged period of time.

The experimental contraceptive apparently does not affect ovulation and menstruation as the current progesterone-estrogen tablets do. Its action is not completely understood, but doctors think it may speed the travels of the egg through the fallopian tubes so fast it hasn't time to develop.