

SURGERY

Renal Transplants Succeed

People suffering from kidney malfunction have lived longer than one year after receiving renal transplants either from cadavers or from live donors.

► NEW HOPE in prolonging a useful life for those afflicted with kidney malfunction is seen in the substantial progress made in transplanting new organs either from cadavers or from live donors.

About 30 persons have lived longer than one year following these "renal transplantations." Moreover, seven doctors who performed research on the subject at the Cleveland Clinic Foundation, Ohio, state that results indicate that "useful prolongation of life is possible in from 30 to 50% of patients" having terminal kidney failure.

In the British Medical Journal, Jan. 2, 1965, the seven physicians described 27 renal transplantations in 24 persons between January 1963, and June 1964. The researchers are Drs. George Dunea, Satoru Nakamoto, Ralph A. Straffon, Julio E. Figueroa, Antonio A. Versaci, Masakatsu Shibagaki and William J. Kolff. Of the 24 persons surveyed, 10 are still alive.

Dr. Straffon, head of the department of

urology at the Cleveland Clinic, said that as of Dec. 31, the clinic had performed a total of 46 transplants on 40 patients. Twenty-two are still alive.

Dr. Straffon also described the "fantastic record" he and his associates have had using kidneys transplanted from cadavers.

"Using cadaver transplants," he said, "you have everything to gain and nothing to lose. You eliminate ethical, moral or religious problems involved with live donors."

Dr. Straffon stated further that it is possible to transplant both kidneys when cadavers are used. The big problem is getting the right kind of kidneys. In the group of 24 surveyed, most patients were able to lead normal lives after successful transplants.

The first few weeks after transplantation is the most critical period. After the first two months, the prognosis improves and the patient has a good chance of survival for at least one year.

• Science News Letter, 87:39 January 16, 1965



Squibb

VACUUM TESTED—The vacuum in every vial of Boplant, the new bone material for humans made from calf bone, is tested with a high frequency coil before leaving the laboratories of E. R. Squibb and Sons, New Brunswick, N. J.

SURGERY

Calf Bone Material Used in Human Grafts

► CALF BONES are being used to repair and replace broken and damaged bones in the human body.

A new product, called Boplant, which is calf bone and cartilage processed chemically to make it compatible to humans, is the first animal bone material to be approved by the U.S. Government for transplantation into humans. It is now being made available to surgeons and hospitals for the more than 700,000 bone transplantations performed each year in this country.

Made by the E. R. Squibb & Sons Pharmaceutical Company, Boplant took eight years to develop and has been used on more than 5,000 patients.

Boplant comes in a variety of shapes and forms for surgical use, including 5½-inch pieces to repair fractured limbs, and chips to fill bone cavities.

Clinical trials begun with Boplant in 1960 showed that the material is quickly and thoroughly penetrated by the host's blood vessels so that it is eventually replaced by the host's own growth of new bone.

The big problem in transplanting other than one's own bone to a part of the body has been the antigenic reaction. The body sets up a defense mechanism to reject any foreign substance, thus, instead of binding itself to the host, the graft becomes a piece of inert matter.

The Squibb process to remove the antigenic material takes more than 35 separate steps. It takes over five months from the time the calf bone enters the Squibb plant until it is sealed in sterile glass vials. Boplant can be stored for at least two years at room temperature in ready-to-use form.

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MEDICINE

Measles Nears Peak

► THE NEW WINTER SEASON for most parts of the country will spread a lot of cold weather, snow—and measles.

The peak of the measles season began in December and will last until March or early April, a U.S. Public Health Service official reported. The lowest point is in August.

Nearly two-thirds of the 500,000 cases of measles reported each year occur in the January to April season. In addition to the known cases, it is estimated that some three to three and one-half million cases go unreported each year.

Common measles, scientifically known as rubeola, eventually catches up with more than 90% of the population, and is not the harmless childhood disease that many people believe.

Measles is still a killer of hundreds of American children. One in five who caught the disease last year ended up with serious complications such as pneumonia, bronchitis, ear infection or encephalitis, a brain inflammation.

It is caused by the virus, *Briareus morbillorum*, which enters the body by way of the nose and throat.

In 1954 Dr. John Enders of Harvard University, Cambridge, Mass., who became a Nobelist for his virus study, succeeded in isolating a strain of measles virus. The strain, now a basis for vaccine work, has led to the development of two kinds of measles vaccines, one live virus and the other killed virus.

On Dec. 15 two new live-virus vaccines were approved by the U.S. Public Health Service, and will soon be available to physicians. The new vaccines are made by Philips-Roxane, Inc., St. Joseph, Mo., and the Eli Lilly Company, Indianapolis, Ind.

The first two licenses for measles vaccines were issued in March 1963 to Merck, Sharp and Dohme, Philadelphia for a live-virus vaccine and Charles Pfizer & Co., Inc., New York, for a killed virus vaccine.

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MEDICINE

Serum Protein Injection Is Hepatitis Preventive

► FIVE-MONTH IMMUNITY to viral hepatitis, an infectious liver disease, appears to be attainable by inoculation with a simple blood plasma protein, gamma globulin, it was reported in Oslo.

The amount injected, 0.04 cc per kilogram of body weight, is one-third the usual dose.

The Norwegian physician bases his recommendation on experience with viral hepatitis among the 21,200 Scandinavian soldiers serving in the United Nations Emergency Force in the Middle East.

Dr. T. Kluge of the Institute of Hygiene and Preventive Medicine in Oslo said that prophylactic use of gamma globulin, the plasma protein concerned with the mechanism of immunity, provided an overall protection rate of 91.3%.

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