

MEDICINE

Extrauterine Live Babies

► **HOPE FOR LIVE BIRTHS** when babies develop outside the uterus was seen in a report by two Jamaican doctors.

Four babies are alive and well following extrauterine pregnancy, Dr. D. B. Stewart and H. G. Dixon of the University College of the West Indies, Jamaica, report in the *British Medical Journal*, Oct. 15, 1960. The obstetricians describe ten cases of advanced extrauterine pregnancy in which all the mothers survived. Five babies were born alive, but one died from prematurity.

Operation is usually advised as soon as diagnosis of abnormal pregnancy is made. But in one case the obstetricians delayed action five weeks after the pregnancy was discovered at the 30th week in an attempt to save the child. The baby lived.

Weights of the four babies ranged from four pounds 11 ounces to six pounds five ounces. One of the four was mildly spastic after 18 months.

At the University College Hospital in Jamaica, the ten cases were the only ones that had been found with over 20 weeks of fetal growth, about one in 930 deliveries.

In extrauterine pregnancy the fertilized egg is arrested at some point between the ovary and the uterus and there undergoes more or less complete development. It may develop in the ovary or in any portion of the Fallopian tube. Although advanced cases rupture and continue development in the abdominal wall, authorities say that it is doubtful whether the egg can be implanted primarily upon this wall.

One of the signs guiding diagnosis is a constant soufflé, or soft blowing sound, that is distinctly louder than the normal uterine sound. The obstetricians say that the sign is useful also in warning of the location of the placenta, the circular mass that affords communication between mother and child by means of the umbilical cord. It is important to know the placental site as the vessels may have to be tied off to prevent hemorrhage.

Removal of the placenta is a problem in these cases, and removal of the uterus to which it was attached in six of the patients was necessary.

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GENERAL SCIENCE

Nobel Prize Winners

► **THE DISCOVERY** of artificial immunity by the two scientists who were awarded the 1960 Nobel Prize for Medicine may make possible the safe transplant of human organs.

Human implications of their research also include the role played by the grandmother in determining her grandchildren's Rh positive and negative blood factors.

Sir Frank Macfarlane Burnet, director of the Walter and Eliza Hall Institute for Medical Research, Melbourne, Australia, and Peter Brian Medawar, Jodrell professor of zoology, University College, London, share the 1960 Nobel Prize money, equal to \$43,625.

Dr. Burnet was knighted in 1951 for his research in virus diseases. In 1949 he started other work, however, which was the basis for the joint Nobel award.

Sir Macfarlane's theory of antibody production is based on his observation of the involuntary behavior of the fetus and newborn animal in the selection of antigens, substances causing the formation of antibodies. Any foreign material then entering the animal at a later stage after birth would cause the formation of antibodies which would reject the foreign matter.

On the basis of Sir Macfarlane's work, Dr. Medawar tried injecting fetal or newborn mice with material from a donor mouse on the theory that the injected mice would consider this as native material. Later on, a graft from the same donor or of the inbred strain of mice showed acquired immune tolerance to the foreign tissue antigen.

Dr. Sanford H. Stone of the laboratory

of immunology, National Institutes of Health, said, "The discovery opens the door to vast research.

"Since we know the fetal animal has a stage of immunological inactivity to make him tolerant so that he will accept a graft after birth, it might be possible to recreate the physiological conditions of infancy in an adult and perhaps develop a drug that can produce artificial tolerance."

This might make organ transplants possible some day in humans.

Dr. Medawar, under a grant from the National Institutes of Health, is now studying the chemical nature of the antigens involved in graft rejections.

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ROCKETS AND MISSILES

Smithsonian Receives First Re-Entry Cone

► **AN AIR FORCE** Thor-Able re-entry vehicle, the RVX-1-5, safely returned from space last year, now has a place of honor in the National Air Museum of the Smithsonian Institution.

The once "out of this world" nose cone, scarred but intact, presents a sharp contrast to the colorful and decorative kites, the first form of man-made aircraft, also on exhibit.

The scorched, unglamorous space pioneer had travelled more than 5,000 miles down the Atlantic Missile range. In re-entering the earth's atmosphere at four miles per second, it was exposed to friction heat above 11,700 degrees Fahrenheit.

Lt. Gen. Bernard A. Schriever, Commander, Air Research and Development Command, in presenting the RVX-1-5 to the Museum, referred to the nose cone as "one of the earliest implements of a new era." Although designed as a weapon it "foreshadows future achievements in the peaceful arts of civilization, just as the first crude weapons of flint and metal did," he said.

"The techniques learned from military developments of this kind will help men on future flights to other planets—and perhaps to other stars," he predicted.

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60,000 LETTERS AN HOUR—

TECHNOLOGY

First Automated Post Office Opened

► **THE FIRST AUTOMATED** post office in the United States has been placed in official operation in Providence, R. I. It uses the latest in mail-handling machines and methods.

The new post office is designated Project Turnkey because it went into operation, figuratively, at the turn of a key. It was designed and constructed by Intelix Systems, Inc., a subsidiary of International Telephone and Telegraph Corporation.

The Post Office Department holds a 20-year lease on the building, with additional options. New equipment in the building is designed to handle 1,100,000 pieces of mail daily.

In Washington, D. C., city post office a letter sorter, developed by Pitney Bowes, Inc., has just been installed. It will handle 60,000 letters an hour. By use of a keyboard, an operator can sort more than 60 letters a minute.

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