MEDICINE

Transfusion Increases Twin's Survival Chance

THE SURVIVAL CHANCES for a small, weak child in a twin birth can be greatly increased simply by holding him a few inches below the level of the delivery table.

This modified delivery technique, advanced by Dr. Melvyn Berlind, chief of obstetrics and gynecology at Unity Hospital, Brooklyn, may sound like a superstitious old-wives' tale, but it is really a means by which the twins' common placenta gives the small baby a blood transfusion.

During birth, Dr. Berlind states, the umbilical cord usually is clamped and cut immediately and the baby is handed to the nurse. In the case of twins, the obstetrician clamps and cuts the cord of the first born even more rapidly than usual in the rush to deliver the second.

The small twin's survival chances depend heavily on giving the baby as much blood as possible at the time of delivery, Dr. Berlind believes. He suggests that if the first baby is small—two to four pounds—he should be held eight to ten inches below the level of the uterus and placenta immediately after delivery and left there until pulsations in the cord stop. During this time the lightweight newborn will receive by gravity a third of a pint of blood.

If a large, strong twin comes first, the cord should be clamped immediately so the twin still in the womb can receive the extra blood, in case this second twin is small.

If both twins are large and healthy, their chances are good in the beginning. When both are small, Dr. Berlind asserts in the Journal of the International College of Surgeons, July, 1960, there is now a chance that at least one will live. Before, both might have died.

Science News Letter, July 23, 1960

ROCKETS AND MISSILES

Satellite to Look Like News Conference

A UNITED STATES SATELLITE being planned will look like a huge collection of photographers' flashbulb reflectors. The Air Force has contracted for a prototype solar power generator made of hundreds of small aluminum reflectors for such a satellite.

Each reflector, four inches in diameter, will focus sunlight on tiny radiation collectors in their centers. The rays will heat one end of a thermocouple device to as high as 1,000 degrees Fahrenheit.

The other end of the device may be only 400 degrees Fahrenheit. The difference in temperature will cause a flow of electrical current. The solar power generator will have no moving parts.

Under the contract with the Hamilton Standard Division of United Aircraft Corporation, the prototype will be a 100-watt model. It will later be designed as a 1,500-watt unit for satellites operating on 90-minute orbits of the earth.

The original model will have 900 reflectors that together cover an area of about 100 square feet. The individual reflectors will be assembled in groups of 28 on lightweight aluminum tubing.

The 1,500-watt generator will probably use 7,000 reflectors in 700 square feet.

It will be designed so it can be folded for storage and automatically unfolded in space. Storage batteries may be used to store electricity for periods when the satellite will be out of the sun.

Science News Letter, July 23, 1960

MEDICINE

Mass X-ray of Malayans To Combat Tuberculosis

THE ENTIRE POPULATION of the Federation of Malaya will be X-rayed under a plan to combat tuberculosis in the country, Minister of Health, Dato Ong Yoke Lin, reported.

Drawn up on the recommendation of Sir Harry Wunderly, World Health Organization TB expert, the scheme will be launched as part of the country's second five-year plan, using several mobile X-ray units and especially trained staff.

The extent of the incidence of TB in Malaya is not exactly known, and a mass X-ray is the best way to find out, the Minister said.

Science News Letter, July 23, 1960

MEDICINE

Rabbit Serum Protects Against Poisoning

A PEDIATRICIAN has successfully used a serum from certain strains of rabbits to treat patients with atropine poisoning, which accounts for many childhood accidents.

The victims, almost always under four years old, are poisoned by cold tablets and other adult medications they find and eat or by plants such as deadly nightshade, henbane and jimson weed.

Dr. Harry C. Shirkey, director of the Children's Hospital at Birmingham, Ala., treated the patients. Dr. Shirkey worked with Dr. Gilbert C. Schmidt, Gary Flamm and Leroy Honkomp, all of the University of Cincinnati in Ohio, in developing the serum.

The scientists believe enzymes in the rabbit serum are responsible for its protective effect. Since several animals are thought to be immune to poisons that would kill children, the scientists anticipate the possibility of using animal sera, animal parts or extracts of animals for antidotes for other poisons.

Science News Letter, July 23, 1960

GEOPHYSICS

Unusual Solar Event May Upset Radio Theory

AN UNUSUAL EVENT on the sun more than a year ago is still under intensive study by members of a solar research group at the National Bureau of Standards Boulder Laboratories in Colorado. An extremely severe radio blackout of long duration occurred, and large radio noise outbursts were heard on a number of wavelengths, beginning at 4:30 p.m., Universal Time, June 9, 1959.

However, no solar flare could be seen on the sun's disk, although a prominent flare would normally be apparent at the time of such a radio disturbance. This unusual occurrence caused Bureau scientists to question previously established relationships between solar events, ionospheric disturbances and geomagnetic storms.

The understanding of these relationships plays an important part in the Bureau's radio propagation prediction services, on which intercontinental communications by shortwave radio are based.

Science News Letter, July 23, 1960

ANTHROPOLOGY

Man and Wolf Have Much in Common

THE BEAST IN MAN may be more wolf than ape, Prof. Marston Bates, University of Michigan zoologist, has suggested.

At least, according to Prof. Bates, man appears to have more social behavior traits in common with wolves than with apes.

Man and the wolf both are hunters, the zoologist observed. Apes and monkeys largely are vegetarians.

Like man, "wolves are good family members," and even help take care of their offspring. Among monkeys, the female bears the burden of rearing their progeny.

Men and wolves associate in groups larger than the family. With wolves, it is the pack. With men, it may be a fraternal club.

Science News Letter, July 23, 1960

MEDICINE

Electronic Monitor Alarm Checks Baby's Breathing

THE FIRST FEW DAYS OF LIFE, when breathing difficulty or failure can result in quick death, no longer need be so dangerous, thanks to an infant respiratory monitor developed in South Africa.

In the monitor arrangement, a lightweight detector strapped to the baby's upper abdomen is connected to a transistorized alarm hooter. If breathing stops for 15 seconds, the alarm goes off, summoning an attendant who gives emergency treatment.

Dr. W. E. B. Edge of Durban, Natal, who originated the idea, says the monitor can be particularly valuable for premature babies and for babies with cerebral irritation or any form of respiratory difficulty. At present such infants are sometimes watched by special nurses, but such nurses are not always available.

Dr. Edge reports in the journal Lancet, 1:1330, 1960, that the monitor made for him by W. L. Eaton of Durban has proved efficient and reliable during a six-month trial. On several occasions it has warned a special nurse, watching a baby, of an oxygen deficiency attack she herself had not detected.

Science News Letter, July 23, 1960