

## MEDICINE

# 'Tapping' for Rh-Factor

To prevent stillbirths due to the effects of the Rh factor, doctors are bringing about early delivery after predicting serious cases by "tapping" fluid in the womb.

► INFANTS of Rh-negative blood type mothers are now being saved in some cases by "tapping" the amniotic fluid in the womb before the baby is born.

To prevent hemolytic disease of the newborn, caused by a blood abnormality, which occurs in perhaps one in 25 matings of Rh-negative mothers with Rh-positive fathers, some obstetricians are bringing about an early delivery after taking a specimen of the fluid surrounding the fetus.

The Rh factor gets its name from the rhesus monkey because it was discovered in 1940 that the factor, always present in these monkeys, occurred in 85% of human beings, who were Rh-positive. The remaining 15% were found to be Rh-negative. It was later found that in more than 90% of the cases of hemolytic disease in the newborn, the mother is Rh-negative while the father is Rh-positive.

The baby may be born dead if this condition is undiscovered and nearly always if it is the severe "hydrops" type of the disease, sometimes called erythroblastosis.

The value of predicting the severity of the condition by examining the amniotic fluid was emphasized in two reports in the British Medical Journal, July 18, 1964.

Although an exchange of blood by transfusion can save lives of babies who are

born alive, the real problem is the prevention of stillbirths, Drs. W. Walker, D.V.I. Fairweather and P. Jones of the University of Newcastle upon Tyne pointed out.

During the period 1952 to 1961 in the Newcastle hospitals, 1,633 infants with hemolytic disease were born alive and 93.3% survived.

However during the same period, the researchers found, 14% were stillborn among 2,609 cases of the disease in Northumberland and Durham.

The physicians said that 50% of stillbirths and severe cases can be foretold by examining the amniotic fluid. By estimating the amount of bile pigment reaching the fluid, the severity of the condition can be estimated.

The procedure of inserting a lumbar puncture needle into the womb through the abdomen was described in the article by Dr. John G. Robertson of the University of Edinburgh, Scotland.

Local anesthetic is used, and the patient can go home after the fluid is removed for examination. The examination takes place usually before the 35th week of pregnancy. Routine induction of labor has been advocated by other obstetricians at between 35 and 40 weeks.

• Science News Letter, 86:71 August 1, 1964

## MEDICINE

# Brain Injuries at Birth

► EVEN MINOR DIFFICULTIES at birth cause enough brain injury to stunt a child's later performances, intelligence tests indicate.

In a Yale study comparing difficulties at birth to defects in intelligence, it was found that verbal and mechanical skills could be affected by prolonged labor, temporary anemia or other birth hazards.

Comparison of the data from the tests, taken at age three and again at age five, shows that as a child grows older, he recovers to an extent the verbal and mechanical skills he lost, the report said. Recovery is greatest among the superior children and the less-damaged average children.

Dr. Ethelyn H. Klatskin, department of pediatrics, School of Medicine, Yale University, studied the health and intelligence records of 193 children. The medical records of their mothers also were checked to find out if they had any problems when their children were born.

The problems were classified as major and minor. Major problems included difficult delivery or abnormal reflex activity in the child.

Minor problems, such as inactiveness or overactiveness in the child at birth, were classified as "potentially stressful" factors at birth.

The children were listed in one of three groups. The "least stressed" group contained those having one minor problem. Members of the "suspect" group had two minor problems, and those in the presumably "stressed" group had at least one major or three minor signs of birth difficulty in their or their mothers' records.

The children were also grouped according to average or superior intelligence on the basis of IQ tests.

The Merrill-Palmer Scale test was given to all the children at age three and the Stanford-Binet, Seguin and Mare-Foal formboard puzzle tests were given at age five.

The test results showed marked differences between the least stressed group and the more stressed groups in the complex visual and verbal tests, Dr. Klatskin reported in the American Psychological Association's Journal of Consulting Psychology, 28:228, 1964.

• Science News Letter, 86:71 August 1, 1964



Linde Co.

**SMALLER THAN THE IRIS**— An example of the continuing miniaturization drive in electronics, this polar solid tantalum capacitor produced by Kemet Department, Union Carbide Corp., is only 29-hundredths of an inch square and 95-thousandths of an inch thick, and is made in ratings from 0.33 to 10 microfarads and 6 to 50 volts.

## PUBLIC HEALTH

## Gall Bladder Removal Cures Typhoid Carriers

► IN NINE CASES out of ten, there is a cure for the menace to the public of Typhoid Marys who, although well themselves, spread the germs to people eating food they prepare.

The New York State Department of Health reports 92% success with gall bladder operations in curing such typhoid carriers.

Although a new penicillin, called ampicillin in Britain and Polycillin in the United States, has been reported curing typhoid carriers in preliminary reports, the usual treatment is to remove the gall bladder.

Medical textbooks list this treatment as the recommended way to end the danger of typhoid carriers who pass along the *Salmonella typhosa* organism by handling uncooked food with soiled hands.

Dr. Julia L. Freitag of the New York State Department of Health describes in Public Health Reports, 79:567, 1964, the results of gall bladder removal, called cholecystectomy, in 54 typhoid carriers in New York State exclusive of New York City.

The legal definition of a chronic typhoid carrier in New York State is a person who has not suffered from typhoid fever within one year, in whose excretions or discharges typhoid bacilli are present.

Such persons are kept under surveillance by the state and local health departments. A registered carrier can be given a clean bill of health if the gall bladder is removed and eight successive specimens are all negative for *Salmonella typhosa*.

• Science News Letter, 86:71 August 1, 1964