

Medical Sciences Notes

CONGENITAL ABNORMALITIES

Low Birth Weight Risk

The underweight baby who is born at or near full term—called a dysmature baby—may be in greater danger than a premature infant.

The dysmature child is more liable to hypothermia, which means that his temperature drops below the normal 98.6 F. degrees. He is also more likely to suffer a cerebral hemorrhage, and have blue, or cyanotic attacks, of which an important cause is deficiency of sugar in the blood or hypoglycemia.

The risk of the dysmature baby developing hypoglycemia is greatest toward the end of the second day. There may or may not be noticeable symptoms—especially twitchings or fits, cyanotic attacks, or just irritability. Even though the condition is not recognized it may nevertheless harm the infant's brain.

In addition, dysmaturity is associated with a higher incidence of congenital abnormalities than is true prematurity. These include congenital heart disease, microcephaly, mongolism and other chromosome defects.

Particular notice should be paid to malformed or low-set ears, which may point to a chromosome defect, or to the presence of congenital heart disease.

Examination of the small baby is especially important if the mother is unsure of her dates.

This report, titled "Babies at Risk," is in the *BRITISH MEDICAL JOURNAL* of May 27.

IMMUNOLOGY

Child-bearing and Cancer

Women who have children are less likely to develop cancer than women who do not, according to a hypothesis by Dr. Samuel Freedman of McGill University, Montreal. Tests now underway on 2,000 women may reveal "whether there is a statistically significant correlation between pregnancy and failure to develop cancer," Dr. Freedman says.

One thousand of the women under test have cancer of the gastrointestinal tract. The other 1,000 are all pregnant.

Dr. Freedman noted structural similarities between a substance found in the gastrointestinal tracts of cancer victims and in the tracts of unborn fetuses. The substance, which he calls carcinoembryonic antigen, may stimulate the production of anticancer antibodies. Tests showed pregnant women and those with small cancerous lesions had antibodies to fight the antigen, suggesting that "a pregnant woman has an immune reaction to a substance in her own fetus," he says.

Results of the study of the 2,000 women should be available by September.

GERIATRICS

Drug Against Confusion

Confusion and forgetfulness accompanying old age may be cleared up with either Dilantin, an anticonvulsant drug, or procainamide, a compound that slows down overactive hearts.

Dr. Paul Gordon of the Chicago Medical School expects clinical trials of these two drugs to begin soon in 200 patients in a home for the aged.

One reason old people are slow to respond to things, Dr. Gordon suggests, is that nerves in their brains fire too rapidly in response to stimulus, thus creating what amounts to confusing static or background noise in the brain.

Animal studies indicate a single stimulus may trigger a rapid-fire, machine gun like burst of nerve impulses, instead of an ordered, comprehensible set of signals.

Dilantin and procainamide, both of which stabilize the threshold of neuronal activity, ought to be effective in clearing up certain kinds of mental confusion, Dr. Gordon reasons. If clinical tests confirm his assumption, these established drugs may find a new medical use.

MORTALITY

Dog Returns to Life

A dog that had been dead from drowning for more than 18 minutes was brought back to life, a Russian scientist reports.

The return took place at the Institute of Physiology of the Ukrainian Academy of Sciences, according to Prof. Vsevolod Yankovsky.

After the dead animal was taken out of the water, its arteries and veins were connected to those of a live dog weighing four times as much as the drowned dog. With the aid of a Bryukhonenko heart-and-lung machine, fresh arterial blood was pumped into the dead dog and used venous blood was pumped out.

Respiration reappeared in 10 minutes, the investigator says, and the whole process of reanimation took one and a half hours. The experiment shows the life of cells in the brain's cortex is longer than six minutes—previously considered the limit, he claims.

RESPIRATION

Two Lung Diseases Similar

Lack of a fatty substance that keeps the air sacs of the lung open has been found both in newborn babies with hyaline membrane disease and adults with emphysema.

Hyaline membrane disease killed Patrick Bouvier Kennedy, premature son of the late President. Emphysema, particularly prevalent among older men, has been linked with cigarette smoking.

In both diseases, the American Thoracic Society was told at its Pittsburgh meeting last week, the lungs show a shortage of surfactant, a key factor in lowering the surface tension of the lung. Low surface tension allows the air sacs to remain open at the end of expiration.

The study of healthy and diseased lungs was reported by Lt. Col. Paul A. Thomas, U.S. Army, who is stationed at Valley Forge General Hospital, Phoenixville, Pa. The Society is a medical arm of the National Tuberculosis Society.