

MEDICINE

Steps to MS Solution

One of the latest clues for solving the problem of multiple sclerosis patients is the finding that their blood contains more cyanide than that of normal persons.

► SCIENTISTS ARE making progress in attempts to solve the problem of multiple sclerosis. This disease, known as MS for short, afflicts more than a quarter of a million Americans. Most victims are between the ages of 20 and 45.

New ways of bringing temporary relief, at least, new knowledge of body chemical differences between MS patients and others, and a potential new early diagnostic test are brightening the dreary MS situation. Best of all, perhaps, doctors and medical researchers have fresh interest in the patients and the disease.

At the National Institutes of Health of the U. S. Public Health Service, scientists heard about one of the latest clues for solving the MS problem. This is the discovery that the blood of patients with MS and certain similar nerve diseases contains more cyanide than that of normal persons. The amount of this poison in MS blood is about one-tenth the quantity which is sometimes fatal. It is about the same as that which causes symptoms like those of MS in healthy people who, in one way or another, absorb unusually large quantities of cyanide.

Along with this discovery came the finding that the chemical, thiosulfate, causes the cyanide to disappear from MS patients' blood within about two minutes. In about 48 hours the cyanide could again be detected.

Whether this harmless chemical, a known detoxifying substance for cyanide, can be used in treatment of MS patients is for future study to determine.

Meanwhile, some patients are getting temporary relief of symptoms, particularly in the acute stage of the disease, from chemicals that dilate blood vessels. Among these are tetraethylammonium chloride, amyl nitrite, nicotinic acid and carbon dioxide. None of these is considered in any sense a cure, however.

Because multiple sclerosis attacks at an early age and almost totally disables many of its victims before it kills, usually by age 45, it is an economic problem as well as a personal tragedy.

The disabilities come through seeing double, tremor, weakness, difficulty in walking and balancing, difficulty in talking, bladder trouble and emotional disturbances.

All these result because the fatty sheath of various nerves is gradually damaged and scarred. The scarred nerves cannot function efficiently and eventually may fail completely to transmit impulses. The patient's troubles depend on which nerves are affected and how severely.

Symptoms may come and go, especially in the early stages. During the intervals, or remissions, the patient may feel quite well, and these remissions may be fairly long. They make it hard to tell whether a new medicine is helping.

Although the disease is a nerve disease, many scientists are studying the blood of MS patients in the hope of getting clues to the disorder. Such studies led to the cyanide discovery described by Dr. Richard C. Fowler of the University of Rochester, N. Y., School of Medicine. They have also shown other scientists that the blood of MS patients clots more slowly than normal in most cases, that it contains more of the fatty chemical, cholesterol, and that it sludges. This sludging, or packing of red cells in the blood vessels, might play a part in causing the disease, Drs. L. Roizin, R. Abel and F. Winn of New York believe, because it might deprive nerve cells of oxygen.

Science News Letter, December 6, 1952

TECHNOLOGY

Floating Truck Lands Combat-Ready Tank

► WATER, beach sands and rough terrain behind the beaches are all navigated with equal ease by a new 60-ton, amphibious cargo vehicle of the U. S. Army. (See SNL, Nov. 22, p. 327.)

Resembling a scow in general appearances, it is equipped with rubber-tired wheels, measuring ten feet in diameter, for traveling on land and twin screw propellers for propulsion in water.

In a demonstration at Fort Lawton, Wash., the huge cargo carrier was loaded at shipside with a medium tank. It transported the tank ashore through the water, over a soft beach and unloaded it inland ready for immediate combat action. The new amphibian has a specially designed landing-craft type of ramp that permits a loaded tank to leave the vehicle under its own power and fully ready for combat.

This amphibious vehicle, called the "Barc," is 61 feet in length, 27.5 feet in width and has a height of 16 feet. It is powered with four 165-horsepower diesel engines, one to drive each wheel. The same engines are used to drive the propellers when the craft is afloat. Two engines power each of the two propellers. Easy maneuvering, on land or water, is emphasized as a characteristic of the new amphibian.

Science News Letter, December 6, 1952



DR. EDWIN G. CONKLIN—Henry Fairfield Osborn Professor Emeritus at Princeton University and world-famous biologist, Dr. Conklin died at his home in Princeton Nov. 21.

NECROLOGY

Dr. Conklin Asked Science To Fight for Peace

► THE SCIENCE of biology lost one of its "grand old men" with the death of Dr. Edwin Grant Conklin, 88, professor emeritus of biology at Princeton University and world-famous for his studies on animal development. Dr. Conklin died Friday, Nov. 21, at his Princeton home, three days before he would have reached the age of 89.

Dr. Conklin had been a member of the board of trustees of SCIENCE SERVICE since 1937 and was its third president over a span of years.

His death marked the end of 61 years of teaching and research. Although he retired from active teaching in 1933, at the age of 70, Dr. Conklin continued working, lecturing and writing until the last. During his 19 years of "retirement," Dr. Conklin turned out 95 articles and three books on biology and the light it sheds on the problems of the human race. Until his last illness, Dr. Conklin worked with a microscope nearly every day on his research.

His most famous contribution to biological knowledge was the demonstration that the future organs of a body could be located in definite sections of a fertilized one-celled egg and in the earliest embryos.

Dr. Conklin could never be accused of being an "ivory tower" scientist. He wrote and spoke constantly about the great problems of the day and the application of science, particularly biology, to them. Before the outbreak of World War II, Dr.