

MEDICINE

Recovery From Anesthesia Hastened By Acid Injection

Palinaesthesia, Method of Reversing Effect of Anesthetics, Found Successful in Harvard Tests

A MEANS of quickly reversing the deep unconsciousness caused by ether and other anesthetics and, in some cases, of bringing back from the brink of death overanesthetized patients, was announced to the American Association for the Advancement of Science by Dr. Walter V. MacGilvra, a dental surgeon of the Harvard dental school, after experiments in which the Harvard medical and dental faculties have cooperated.

A "shot" of weak hydrochloric acid injected directly into the blood is the agent that has been found effective in recalling and restoring to sensibility patients who would otherwise sleep for hours, and in some cases would never awake.

Followed Wrong Theory

While Harvard scientists have demonstrated the effectiveness of this new medical method, it was a young woman technician in a medical laboratory in Joplin, Mo., who, by following what is now believed to be a wrong theory, actually discovered the method. Miss Pearl L. Moorman, in an effort to save an animal with which she was working, introduced a minute dose of acid into its blood and found that it awoke from anesthesia.

She wrote Dr. MacGilvra an account of her discovery, and both he and a Kansas City medical laboratory verified her results, although her theory that anesthesia makes the blood more alkaline and that therefore acid would reverse the process has not been substantiated.

For Many Shocks

This acid method of terminating anesthesia has been christened "palinaesthesia," the name having been selected with the blessing of the Eliot professor of Greek at Harvard, Prof. Charles B. Gulick. A rough English equivalent is "renewed feeling."

Because extreme alcoholic intoxication, asphyxiation, near drowning, severe electric and other shocks are very similar to the purposely induced

anesthetic states caused by ether and other drugs, Dr. MacGilvra believes that injections of weak hydrochloric acid will prove effective in rescuing and bringing back to full use of the faculties, those who suffer from such difficulties. Palinaesthesia has not yet been tried on an extremely intoxicated person simply because Dr. MacGilvra has not yet had such a case made available to him.

"Annoying Wakefulness"

The first use of palinaesthesia on a human being was made by Dr. MacGilvra and Dr. Alfred Ellison, then resident surgeon at the Worcester Memorial hospital, last July. It was a real emergency. A patient had had an unusual reaction to avertin and following an operation he was plainly in a dying condition. As a heroic measure, Dr. MacGilvra, using the experience of successful experiments on rabbits, injected a weak solution of hydrochloric acid in the patient's veins.

There was an immediate improvement with the first few drops that en-

tered the blood, and forty minutes after the first injection, the patient, who had been so near death, was actually awake and answering questions. That night he complained of annoying wakefulness.

Seven more times palinaesthesia has been used on human patients, each time with striking results. Now the doctors are ready to suggest its use not only in emergencies to save life that might be taken by unusual effects of anesthetics, but as a routine method of awakening patients early after operations.

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Palinaesthesia Finding Described by Discoverer

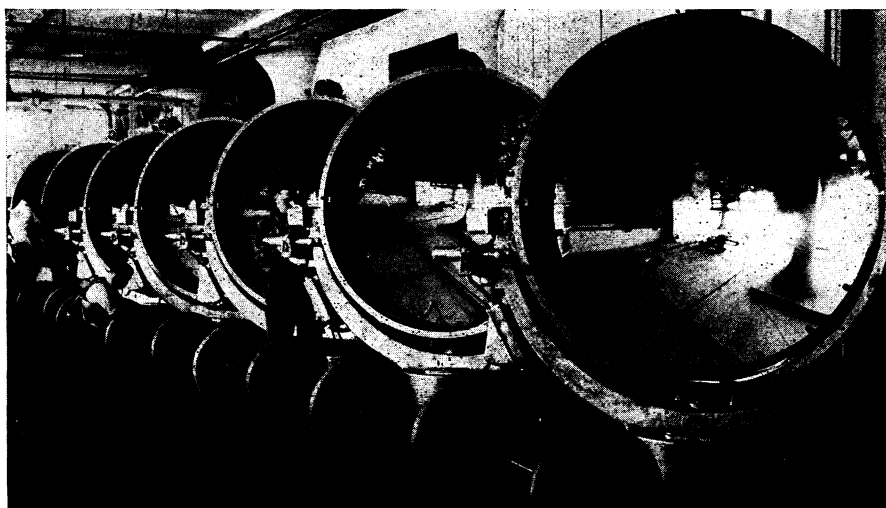
An auburn-haired, gray-eyed young nurse-technician of Joplin, Mo., is the discoverer of palinaesthesia, the method of quickly reversing the anesthetic state. She is Pearl L. Moorman, age 34, who is in charge of the Duncan Medical Laboratory in Joplin and supervises the laboratories of the city's health department and Freeman hospital.

Miss Moorman's statement, made at the request of Science Service, follows:

By MISS PEARL L. MOORMAN

I MADE the discovery of recall from anesthesia by intravenous injection of hydrochloric acid while trying to obviate the high death rate of anesthetized guinea pigs used in scientific work.

In approximately three hundred animals anesthetized only three have been lost and these probably died because of the fact that I had used them for four or five experiments in a single day.



SEARCHLIGHTS ON PARADE

One hundred and four 60-inch diameter anti-aircraft searchlights are being built for the U. S. Army by the Sperry Gyroscope Co. with \$2,015,900 of PWA funds. Improvement in design of the electric arc light source and of the reflector curve make these lights the Army's most powerful. Each will throw a beam of about 800,000,000 candlepower, visible 100 miles.