MEDICINE

Safe Sleeping Pills

Announce development of drug combining a barbiturate compound with a stimulant drug that will give protection from barbiturate overdoses without checking beneficial effects.

➤ A "CHEMICAL policeman" expected to save thousands of lives from sleeping-pill death has been developed.

It consists of a combination of a barbiturate compound with a stimulant drug which, under the name Metrazol, has been widely used in shock treatment for mental sickness.

The drug combination was worked out by Dr. Theodore Koppanyi, professor of pharmacology at Georgetown University School of Medicine, and Dr. Joseph F. Fazekas, chief of staff at Gallinger Municipal Hospital, Washington.

Barbiturates are known by a host of names from slang terms such as goofballs and red devils to medical and trade names such as phenobarbital and luminal. They are extremely valuable drugs for inducing sleep, quieting restless and nervous patients, preparing patients for operation, and for anesthetics for some operations. They have also been used as hypnotic drugs in treatment of some psychiatric patients.

But they have been widely abused by lay persons seeking a thrill. They have been used as suicide drugs. And many deaths have been caused by accidental overdoses taken by persons in a befuddled or confused condition from the first dose or two.

Because of their close contact with fatal and near-fatal poisonings from barbiturates, Drs. Koppanyi and Fazekas tried to find some combination of drugs which would give protection against barbiturate overdosage without checking the beneficial effects of barbiturates.

They found the combination they were seeking when they tried barbiturates with Metrazol, or pentylenetetrazol as it is known medically, they report in the District of Columbia *Annals of Medicine* (April).

When given by mouth in relatively small doses this drug is a safe nervous system stimulant. Used in shock treatment of mental patients, it causes convulsions because it is given in larger doses injected rapidly into the vein.

Following trials of various combinations of this drug with barbiturates in experimental animals, three different combinanations were tried in humans. More than 200 have now been given the combinations, some for as long as three months, without undesirable side-effects.

The combination drug produced sleep from which the patients could be easily aroused. They could walk without staggering and there were no convulsions. There were no signs of the mental fuzziness which often follows use of barbiturates alone. Even large doses did not cause memory loss or anti-social behavior.

A further advantage of the new combinations seems to be that they would tend to prevent attempted suicide when taken in extremely large doses for that purpose. This is because large doses of pentylenetetrazol cause nausea and vomiting, prevent the barbiturate depressing effect from producing complete paralysis of the breathing center in the brain, and delay the onset of this condition for a considerable time which would allow for medical treatment to overcome the effects of overdosage.

Three effective combinations were worked out by Drs. Koppanyi and Fazekas: three parts of pentylenetetrazol with one part of pentobarbital sodium; three parts of pentylenetetrazol with one part of secobarbital sodium; and one and a half parts of pentylenetetrazol with one part of phenobarbital sodium. These give doctors moderate acting, short acting and long acting forms of the drug to use, according to the kind that is needed for a particular patient.

The three combinations are being made by Strong Cobb and Company of Cleveland under the trade names Tetrophenobarb, Tetropentobarb and Tetrosecobarb. They will be available only by physician's prescription.

Science News Letter, April 25, 1953

ELECTRONICS

Portable TV Transmitter Serves Blocked Areas

➤ A SUITCASE-SIZED television transmitter has been developed to speed spot news to your video screen.

And if you live in a mountain-locked community, it may mean that television signals can be snatched from the skies and sprayed down to your antenna in the valley. But someone has to figure out how to make it pay.

The television transmitter plugs into ordinary household electric current. It takes the picture from the camera in the form of electric impulses. It beams both picture and sound to a receiver.

This means that a bad airplane crash in an out-of-the-way place can be televised from the spot, and can be relayed back to the nearest station scores of miles away. There it can be fed into the network for national telecasting.

The system can be reversed to pick up television programs from a far-away station and rebroadcast them locally. The transmitter was developed by the Raytheon Manufacturing Company.

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PORTABLE TRANSMITTER—Light enough to be picked up and moved about by one man is the small transmitter shown here. It was developed to speed sending of spot news from remote areas.