MEDICINE

Poison Protection

Patients being treated with big doses of certain arsenic drugs may eventually be protected against ill effects by chemical.

➤ PATIENTS treated with big doses of certain arsenic drugs may eventually be protected against poisonous effects which sometimes occur. This discovery is announced by Dr. J. H. Sandground of the Lilly Research Laboratories (*Science,* Jan. 15).

Dr. Sandground was testing an arsenical drug, carbarsone, for its action on trypanosomes, the tiny disease-causing parasites. Results looked good. Then he wondered whether the action would be blocked by para-aminobenzoic acid—sometimes dubbed "pab"—just as the sulfas are robbed of their curative power by the same chemical.

Rats given big doses of carbarsone in combination with "pab" soon showed signs of recovery. Fever and anemia lessened, showing that the disease-causing trypanosomes were being blitzed just as fast as usual. A big majority of the rats survived. But most of the rats died that received the same big doses of carbarsone without any "pab."

In some way, Dr. Sandground decided, the "pab" protects rats against excessive doses of carbarsone.

Perhaps it would also protect against possible poisoning from administration of other arsenic compounds of the same type. So he tried it on tryparsamide: then on atoxyl and acetarsone which are relatively more unsafe.

Killing doses of the drugs were given to rats in various ways—in stomach, vein and muscle—still "pab" pulled a large proportion of them through (70 to 100%). Of those that didn't receive "pab," few survived—18% on the average.

Research work is now continuing to find out more about this protective action against undesirable arsenic effects which sometimes occur in treatment of amebic illness, such as dysentery, and trypanosome diseases like sleeping sickness.

Additional studies of clinical applications in man are also being made, Dr. Sandground reports, especially in connection with the arsenical treatment of syphilis attacking the central nervous system.

Science News Letter, February 6, 1943

VICTORY SYRINGE—This new one-dose morphine syringe was developed for OCD. It is made entirely of glass and plastic, saving war-needed tin.

MEDICINE

New Morphine Syringe Developed for OCD

➤ A NEW MORPHINE syringe to ease pain and fight shock in home-front casualties has been developed for the exclusive use of physicians attached to the OCD Emergency Medical Service.

Because of the critical shortage of tin, the new device is made entirely of glass and plastic. The single-dose syringe generally used for this purpose has been made almost entirely of tin, consisting of a small tube similar to that used for toothpaste, from which the physician squeezes the drug solution through a needle attached to the opening.

The new device to be used by OCD is a small glass ampule with a thin, tapering neck over which is fitted a soft plastic tube. The needle is attached to the end of the tube.

The drug solution is sealed in the glass ampule under pressure of about 15 pounds per sqare inch. To administer the medicine the physician inserts the needle into some part of the patient's body and breaks the thin neck of the ampule by bending the plastic tube. The pressure inside the ampule forces the solution out through the needle.

Administration of morphine to persons trapped under bombing debris or in the collapse of a building has been found by the British to be a highly desirable first step in rescue. Such treatment greatly increases the victim's chances of recovery by easing pain, inducing rest, and retarding the development of hysteria and shock.

An additional asset of the new device is that it can be used with one hand so that a victim trapped inside a structure or buried beneath debris can be aided if the physician is able to reach any part of his body.

Science News Letter, February 6, 1943

MEDICINE

Tropical Climate Makes People Prone to Allergies

➤ TROPICAL heat makes people and other animals more prone to allergic trouble, such as hay fever and hives, but allergic troubles are much commoner in temperate zone lands, Dr. Clarence A. Mills, of the University of Cincinnati, told the Fifth Annual Forum on Allergy in Cleveland.

The seeming contradiction is explained by the fact tropical rains keep the atmosphere washed clear of plant pollens. In only a few tropical areas is there cyclonic storminess to give wide pollen distribution through the upper atmosphere.

In most temperate regions, however, troublesome pollens are more commonly produced and are given much wider distribution through the upper air currents of our cyclonic storms.

The storms also bring us a large number of colds and other nose and throat infections, Dr. Mills pointed out, and thus increase our troubles with bacterial allergy. There is also a hint, he said, that falling barometric pressures as storms approach tend to cause tissue swelling and greater sensitivity to allergic reactions.

People in the tropics may suffer less from hay fever because of the rain-washed, pollen-free air, but their greater tendency to allergic reaction shows itself in another way. Reactions to foreign proteins encountered in the course of medical treatment for disease, Dr. Mills said, are more frequent and more troublesome in residents of warm countries than in those of middle temperate coolness.

Science News Letter, February 6, 1943