medical sciences

STROKE

Enzyme used to treat clots

Encouraging progress is reported from the University of Ulm in West Germany in the use of the enzyme streptokinase in treating victims of stroke.

Dr. Volkar Hiemeyer investigated the effects of the enzyme on the fibrin of animal blood clots before testing its effectiveness on humans. He discovered that treating artificially induced clots in the arteries of cats with streptokinase considerably reduced their spread. Further, the heart current rapidly returns to normal, avoiding serious damage to the heart muscles.

However, Dr. Hiemeyer points out that this enzyme therapy appears to be successful only if it is applied within the first few hours after the occurrence of the stroke. After 12 hours the effect is significantly less, and one day after the thrombosis had been produced in the experimental cats the enzyme had no detectable effect. Anticoagulants also are used with the new treatment with streptokinase.

CHOLERA

Carrier not like Typhoid Mary

The World Health Organization reports discovery of a woman dubbed Cholera Dolores who is a five-year carrier of cholera. Unlike Typhoid Mary, the prototype of carriers of typhoid, this cholera-carrier does not seem to be infecting others.

Dolores is the name given to the carrier because it was a woman named Dolores (last name unidentified), a 46-year-old mother of six, in the Philippines, who continued to pass vibrios, the organisms of the mild cholera El Tor.

Cholera has been storming around the world, even threatening Europe for the first time since the 1890's. While stemming the assault in the Middle East, physicians have assumed that cholera patients or contacts soon excrete the invading vibrio; discovery of a patient who continues to carry the disease is disconcerting.

In the Philippines in the early sixties, a focus of El Tor cholera caused considerable trouble because a few carriers were found who excreted vibrios for three to four months intermittently after apparent clinical cure. Followed closely, they became negative, with the single exception of Dolores M.

Dr. J. C. Azurin reports to WHO headquarters in Geneva that Dolores has continued to pass vibrios although she has been discharged as cured of cholera herself.

TUBERCULOSIS

New test reported by WHO

A simple biological method of determining small amounts of anti-tuberculosis agents in body fluids is reported by the World Health Organization in Geneva.

It can be used as a drug-susceptibility test and for finding out the level of tuberculostatic activity of a patient's serum.

The new technique, credited to Dr. K. D. Stottmeier, now at Forschunginstitut, Borstel, West Germany, who formerly worked at the National Communicable Disease Center in Atlanta, Ga., consists of a vertical diffusion method shown to be a reliable assay method for isoniazid, PAS, ethionamide and ethambutol—all drugs used against TB.

Drug levels in body fluid can be determined by either chemical or biological tests, WHO physicians explain. The chemical ones thus far are neither sensitive nor specific enough to detect low concentrations of these drugs in the body.

SNAKE BITE

New serum for all venoms

A new serum that will treat the bite of all known venomous snakes in Australia and New Guinea has been developed by the Commonwealth Serum Laboratories in Melbourne.

The new antivenin is already in stock in North Queensland towns of Cairns, Townsville, Rockhampton, and in South Queensland in Brisbane, Toowoomba and Lismore in New South Wales.

The serum will neutralize the venom of taipan, death adder, brown, tiger and black snakes. It is a mixture of antivenins for the venom of each of the snakes.

Minute amounts of each type of snake venom were injected into individual horses that were able to cope with the poisons and build antibodies in their blood. When the horses became immune, blood was taken from them and the the venom-resistant antibody concentration was extracted and refined. The antivenins from different horses were then mixed to give the comprehensive snakebite serum.

The spokesman emphasized that it will be of greatest significance when anyone has been bitten by an unidentified snake. Instead of taking time to find out which of the individual antivenins is required, one injection will be adequate.

ELECTROCARDIOGRAMS

Nutmeg grater is basis of new method

Hillier & Son (Electronics) Ltd., Commercial Road, Reading, Berkshire, England, has developed an electrode from a tin-plated nutmeg grater that does away with the messy saline jelly now used in electrocardiography.

The usual electrocardiogram is obtained by applying four flat metal electrodes to the limbs and a suction electrode to the chest wall.

Bedford General Hospital, after four years' research, showed that satisfactory skin contact may be obtained with a dry electrode consisting of a number of points instead of the flat electrode that requires jelly to stick. An ordinary tin-plated nutmeg grater was used to construct the dry multipoint electrode. More than 30,000 electrocardiograms have been taken with the device, which is now available in a commercial version. The time required for electrocardiograms is approximately one third that necessary with the old method.

The engineered version of the device is produced under license from the National Research Development Corp. It is somewhat like the nutmeg-grater prototype, but is smaller and employs improved materials.