

MEDICINE

Hormones and Antibiotics

Combining antibiotics and hormones found effective for combating disease germs. Mold drugs are now entering the war against cancer.

► THE NEW way to treat serious infections is to use both an antibiotic, such as penicillin, and one of the hormones famous as anti-arthritis drugs, cortisone, hydrocortisone or corticotropin (ACTH).

Success with this double-barreled attack on disease germs was reported by half a dozen doctors from different parts of the country at the Second Annual Symposium on Antibiotics held in Washington under the sponsorship of the U. S. Food and Drug Administration and the journal, *Antibiotics and Chemotherapy*.

Heretofore, doctors have considered it dangerous to give the hormones to patients with infection. This was because laboratory animals with infections usually died if given these hormones.

The hormones, however, have two effects which should be helpful in fighting infections: 1. a profound anti-inflammation effect; and 2. a non-specific antitoxic effect that acts to counteract poisons from disease germs.

The advantages of the hormones can be realized if they are given with a suitable antibiotic and if certain other precautions are observed, Dr. Laurance W. Kinsell of the Highland Alameda County Hospital, Oakland, Calif., reported.

Experience during the past four years, he said, shows that giving the corticoid hormones results in "rapid and striking clinical improvement" with lessened toxicity of the system. If antibiotics are given at the same time deaths and sickness can be lessened without any untoward effect of the corticoid.

A high-calorie, high-protein, high-potassium and low-sodium diet must be given at the same time. Corticotropin must be given at least one day longer than cortisone, to prevent any residual damage to the adrenal glands. And the antibiotics must be given for at least three days after all hormones have been stopped to protect against any spread of the infection that might result from residual effects of the hormones.

Dr. Kinsell's hospital now uses this treatment as a routine for all patients with non-tuberculous meningitis; for very weak patients with generalized peritonitis or any patient with peritonitis of more than 24 hours duration, and for any patients with an infection where it seems probable death will occur before the antibiotics have time to do their work.

"Dramatic" improvement following this treatment in five patients severely sick with infectious mononucleosis was reported by Drs. Edward L. Quinn, David Bunch and Muriel Carson of the Henry Ford Hospital, Detroit.

Prompt relief of symptoms with improvement or cure in 22 of 24 external eye infections followed this treatment, Capt. Robert W. Neidlinger of Brooke Army Hospital, Fort Sam Houston, Tex., reported.

Ointments and lotions containing both antibiotics and hydrocortisone have proved valuable in treating certain skin conditions, particularly where pus is a complication of the eruption, Dr. Harry M.-Robinson Jr. of Baltimore said.

Mold Drugs for Cancer

► ANTIBIOTICS ARE entering the war against cancer. These chemicals belong to the group of mold remedies, so called because the first one, penicillin, comes from a mold. Heretofore they have been famous for the number of germ diseases and infections which they can stop.

The new phase of the antibiotic era was discussed at the same symposium.

Puromycin, one of the newer antibiotics, slows the growth of one kind of breast

cancer transplanted into mice, a team of scientists from Lederle Laboratories, American Cyanamid Company, Pearl River, N. Y., reported.

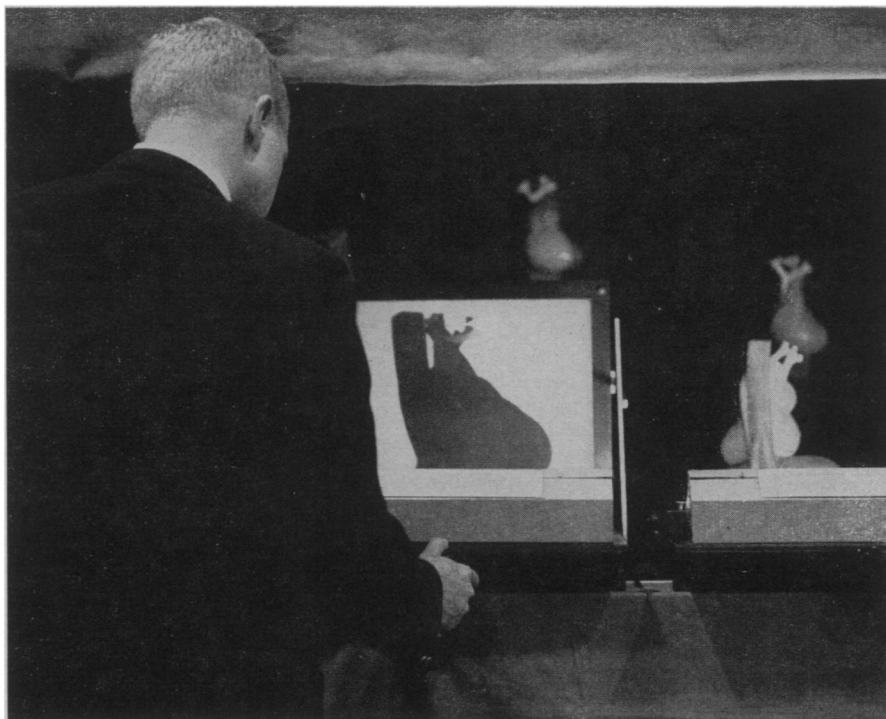
One part of the molecule, the aminonucleoside portion, has the cancer-arresting activity, Drs. P. L. Bennett, S. L. Halliday, J. J. Oleson and J. H. Williams of Lederle have found.

Following this lead, they have tested a number of similar amino acid compounds and have found five that have equal or better anti-cancer activity in laboratory animals.

Puromycin comes from one of the *Streptomyces* soil organisms of the same general family that earlier yielded streptomycin.

Trial in human cancer patients of another antibiotic was also reported to the meeting. This is a new antibiotic, actinomycin C. Its anti-cancer activity in mice and results of trial in 15 human patients were described by Drs. John B. Field and Miss Francoise Costa and Miss Angela Boryzka of Schenley Laboratories Inc., New York.

Other new antibiotics reported include: fungichromin and fungichromatin from Sharpe and Dohme, division of Merck and Co., Inc., West Point, Pa.; spiramycin from the Rhone-Poulenc Laboratories, Paris, France; etamycin from Bristol Laboratories, Inc., Syracuse, N. Y.; griseoviridin and viridogrisein from Parke, Davis and Company, Detroit; pleomycin from Sharpe and Dohme; anisomycin and PA-105 from Chas. Pfizer and Co., Inc., Brooklyn, N. Y., and



HEART SILHOUETTES—The silhouettes of hearts can aid doctors in the diagnosis of heart defects, as Dr. J. Scott Butterworth demonstrates here. The outlines on the screen give clues to troubles. The screen can then be folded so the heart model can be studied, thus allowing a check of the diagnosis by silhouette against the easier-to-see faults of the model.