

PHARMACOLOGY

FDA Denounces Krebiozen

Depending upon Krebiozen as a cure for cancer could be fatal to the patient, and to protect the public the drug should be kept out of interstate commerce—By Faye Marley

► EACH DAY that a person with treatable cancer relies upon Krebiozen "is a day that brings him closer to death," the U.S. Food and Drug Administration said in its strongest statement following the Chicago acquittal on fraud charges of the producers of the drug.

"The decision in Chicago was a disappointment to FDA," the statement reads. However, it does not alter the decision of the Commissioner of FDA, Dr. James L. Goddard, and the agency to keep Krebiozen out of interstate commerce as a so-called anticancer agent.

As early as 1963, Krebiozen was proved to be composed of mineral oil and creatine, a chemical that is present in all humans and other vertebrates.

"FDA will carry out its responsibility to the public by doing whatever will be necessary to keep Krebiozen out of interstate commerce. We will do this as a life-saving activity."

The fact that a jury in Chicago found Dr. Steven Durovic, the Yugoslav scientist who "discovered" Krebiozen, innocent of fraud and conspiracy in promotion of the drug, along with Dr. Andrew C. Ivy, physiologist

and former vice president of the University of Chicago, could give the public a false impression.

Sen. Paul Douglas (D-Ill.) called again for a thorough clinical and hospital test for Krebiozen. However, his suggestion that the National Institutes of Health add Krebiozen to the list of chemical products they are testing strikes the National Cancer Institute (NCI) as a strangely unscientific idea, SCIENCE SERVICE was told.

Dr. Kenneth M. Endicott, NCI director, stated in 1963, that a careful review of 504 case records by a committee which he had appointed "clearly establishes that Krebiozen does not possess any anticancer activity in man." He said at that time from a scientific standpoint, "we regard the case closed."

The jury's acquittal of the Krebiozen promoters means only that they were not guilty of intentional wrong-doing. If they wish to continue producing Krebiozen, they must go through the usual application to FDA for approval of a drug, an approval not likely to be given in light of present research.

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MEDICINE

No Flu Yet, Just Colds

► PEOPLE ARE SAYING they have a flu bug, but the U.S. Public Health Service says no influenza has been officially reported this season.

What most people have is the common cold, or a gastrointestinal upset, or both. The well-known seasonal cycle of colds—high in winter, low in summer—continues to be demonstrated.

A 10-year study of a small group of Cleveland, Ohio families shows an "amazing constancy" in the number of colds from year to year, reported Dr. John H. Dingle of the Western Reserve University School of Medicine, Cleveland, in *Medical Times*, February 1966.

A total of 25,155 cases were diagnosed, a rate of 9.40 illnesses per person each year. Of these, 15,783, or 63% were classified as infections of the respiratory tract.

Ninety-five percent of the respiratory infections were diagnosed as the common cold, rhinitis, laryngitis, bronchitis and other respiratory illnesses. Symptoms included "weeping" or lachrimation, sneezing, runny nose, irritated or mild sore throat, chills, hoarseness, cough, headache, malaise, and sometimes, especially in children, fever.

More than 150 viruses are now known to be associated, in one way or another,

with symptoms of the common cold, Dr. Dingle said, explaining that there are probably hundreds or even thousands of others, as yet undiscovered.

Rhinoviruses seem to be the most important viral cause of common colds and may cause 50%. They appear to affect the upper respiratory passages, inflaming the mucus membranes. Recurrent colds are believed to be due to different strains of the rhinoviruses, however, and more than 50 such strains, probably subtypes, have been isolated, though there are probably many more, estimated from hundreds to thousands.

There are four viruses in the parainfluenza group, of which types 1, 2 and 3 have been most extensively studied. These undoubtedly cause the common cold syndrome, especially in young children, but rarely in adults, said Dr. Dingle. Type 3 appears to be most prevalent, and little is known about type 4.

These viruses also involve the lower respiratory passages, causing croup, bronchiolitis and bronchopneumonia in infants and very young children.

There are 28 different adenoviruses, of which types 1 and 7 in particular may cause severe and even fatal pneumonia. Type 4 is perhaps the commonest cause of acute respiratory disease at military recruit

training posts throughout the U.S., yet it does not seem to affect persons in civilian life.

Reoviruses, of which there are three types, have been isolated from secretions of the respiratory tract as well as of intestines, but are relatively unimportant. Respiratory syncytial viruses, of which there are at least two subtypes, cause common colds in infants and children as well as in adults.

Dr. Dingle grouped together other viruses, which not only cause symptoms of the common cold, but usually cause other illnesses. These viruses include influenza, Coxsackie groups A and B, Echo, herpes, polio, mumps and measles.

The present need is for a "broad spectrum antiviral drug" that will prevent viruses from entering susceptible cells or multiplying in these cells. Without such a drug, a vaccine seems impossible to develop because of the sheer number of immunologically distinct viruses involved.

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MEDICINE

Rare Reaction in Blood Caused by Penicillin

► TWO RARE CASES of red blood cell destruction due to reaction against penicillin have been reported.

One case in Boston and another in San Francisco are described in the *New England Journal of Medicine*, 274:178, 1966.

Dr. Marilynne A. Swanson of Tufts University Blood Research Laboratory told SCIENCE SERVICE that only about one in 5,000 persons undergoes red blood cell destruction, or hemolytic anemia. In contrast, about one in 300 persons reacts to penicillin in the usual sensitive manner, in which rash and fever are symptoms.

Neither of the two patients died, but Dr. Swanson said it would be desirable for researchers to watch for such cases in the future.

Almost 90% of persons taking penicillin will develop an antibody or immunity to the antibiotic, but in these two cases the penicillin coated the surface of the red blood cells, and the circulating antipenicillin antibody "hooked" onto the cells to destroy them.

Four previous cases of hemolytic anemia have been reported with suspected relationship to penicillin, but because all had serious infections and were receiving other drugs, the exact role of penicillin remained doubtful.

In the California report, by Dr. Lawrence D. Petz and H. Hugh Fudenberg of the University of California School of Medicine repeated the penicillin dosage later when the patient was well, thus proving that it was the definite cause of hemolytic anemia. The condition can be reversed, and the patient was carefully watched to prevent danger.

Assisting Dr. Swanson at Tufts University Blood Research Laboratory were Drs. Devendrathan Channoungan and Robert S. Schwartz.

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