

MEDICINE

Heat Destroys Cancer

Removal of cancerous tissue by the use of heat has been successful, and a method of immunization by inoculation against further cancer spread is being tested—By Faye Marley

► **CANCER DESTRUCTION** by heat instead of by knife has succeeded in 400 patients at Michael Reese Hospital in Chicago, and in 282 patients at the Mayo Clinic in Rochester, Minn.

Dr. Alfred A. Strauss, 82-year-old senior attending surgeon at Michael Reese, said he feels he is approaching the climax of his 51 years of research on the single project of a tube method of surgical diathermy. Soon he hopes to start injection of humans with dead cancer material from their own cancers that will prevent the original cells from spreading.

Some use of the method in breast surgery on both men and women has been tried, but the procedure has been mainly used in rectal, tongue and mouth cancer.

Dr. Strauss does not advocate giving up conventional knife surgery for cancer, but in the case of rectal malignancies, he points out that survival has been equal, and that patients are much happier with normal means of evacuation than with a permanent colostomy opening.

Electrocoagulation is "at least as good as surgery," he said at the meeting of the American Medical Association in San Francisco. Freezing methods also might work, he believes, but he has used only heat.

Coagulation is like burning off a wart. There have been few recurrences in the same site. An 89-year-old man who could not undergo conventional knife surgery lived four years after Dr. Strauss treated him with the electrocoagulation method.

What Dr. Strauss hopes to do for humans, as soon as he has inoculated at least 100 rabbits, is to take pieces of their own cancer material and cook it in petri dishes, then inoculate them with the material to prevent future spreading of cancer cells.

In 1962 he began taking coagulated cancer debris from Belgian hares and transferring it to normal rabbits with resulting absolute immunity. With the late Dr. Max Appel, who collaborated with him in Chicago, Dr. Strauss inoculated 100 rabbits three to four times in two years. All proved to be immune. Non-immunized animals given the same cancer material died within eight to 12 weeks.

Dr. Strauss is a consultant for the University of Washington Medical School at Seattle, and also is attending surgeon at Louis A. Weiss Memorial Hospital and Franklin Boulevard Hospital in Chicago. He said he has seen skeptical surgeons accept his procedures over many years.

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MEDICINE

Stress Linked to Heart

► **STRESS** plays a vital role in causing heart disease, much as it does with ulcers, colitis, headaches and mental breakdowns, several investigators claimed at the American Medical Association meeting in San Francisco.

Dr. Henry I. Russek, consultant in cardiovascular disease, U.S. Public Health Service Hospital, Staten Island, N. Y., said in San Francisco that emotional stress in work may be "far more significant" than heredity, dietary fat, tobacco, obesity or physical activity, as a cause of coronary disease.

Dr. Russek based his report on findings in a study of 100 young coronary patients, followed up by verifying evidence from answers to questionnaires sent to more than 12,000 professional persons in 14 occupational groups.

Among the 100 patients, at the time their heart attack occurred, 91% were actually holding down two jobs, working more than 60 hours a week, or experiencing unusual fear, insecurity, discontent, frustration, restlessness or inadequacy in relation to employment, Dr. Russek said.

Stress causes you to smoke more, one researcher pointed out, and persons who have the ability to adapt to what is bother-

ing them will be likely to give up the habit more easily than others.

There was a significantly higher number of heart attacks among patients who had never smoked than among persons who stopped smoking.

"These findings cast doubt on the alleged role of smoking in the beginning of coronary heart disease," Dr. Russek said. "On the other hand, recognition of the importance of emotional factors in the initiation and progression of hardening of the arteries permits a logical explanation for the unexpectedly low prevalence of coronary heart disease observed in former smokers."

Dr. Robert S. Green of the Cincinnati Heart Research Foundation, Cincinnati, Ohio, said fatigue, tension and worry contribute to heart attacks.

After questioning 1,000 heart patients and their relatives and friends about events leading up to heart attacks, Dr. Green said he believes diet is not important in heart problems. This clashes with a leaflet recently sent out by the American Heart Association urging low fat diets.

The general opinion of heart specialists is that more research is needed.

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PUBLIC HEALTH

Poverty Blamed for Rise In Urban Tuberculosis

► **TUBERCULOSIS**, once the number-one cause of death in the United States, is on the rise again in many urban areas throughout the country, and the increase is being blamed on "poverty."

In at least 30 major U.S. cities, including New York and San Francisco, the number of new active cases of TB was higher in 1963 than in 1962. In Akron, Ohio, the increase was more than 50%; in Fort Worth it was 46.8%, and in Dallas it was 39.3%. The United States as a whole continues to report a decline.

Dr. George James, Commissioner of the New York City Department of Health, said that this increase in urban incidence is an outgrowth of "poverty." This explanation includes several factors.

First, the population of the country is increasing. Thus, even if conditions remain the same, some increase in the number of cases is to be expected.

Second, as the population grows, the cities become more crowded, particularly in the poorer sections. Tuberculosis, like any infectious disease, is more likely to spread in crowded and unsanitary conditions.

Third, there is actually an increase in "poverty" in many cities. The people with higher incomes have tended to move out into the suburbs in recent years, abandoning the city to the poorer segment of the population. Although the income of this segment has been rising in many cases, the overall average has been dropping in many cities.

Fourth, the educational level in poorer sections is usually lower than in prosperous areas. Lack of knowledge about TB and how to prevent it naturally increases the chance of infection.

Finally, the percentage of Negroes and other nonwhites is on the increase in urban areas. Often excluded from fashionable suburban areas, Negroes must stay in the cities. Negroes are believed to be physically more susceptible to tuberculosis than are whites.

These facts were reported by Dr. James and by Mrs. Alice Fordyce, vice chairman of the National Health Education Committee, Inc., before the Senate subcommittee in appropriations for the Department of Health, Education and Welfare.

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EDUCATION

Fellowships Available From Science Foundation

► **THE NATIONAL SCIENCE FOUNDATION** is announcing the availability of various kinds of science fellowships. Applications for most are due in the fall with awards late this year or early next. Various kinds of grants are made to those working for doctoral degrees, postdoctoral study, to college teachers, secondary school teachers, and for postdoctoral study in NATO countries.

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