

NEUROLOGY

Wipe Out Cancer's Pain

Electrical jolt from wires in brain of cancer patient brings relief from excruciating pain, experiment with one patient shows. Effect lasts about a week.

► THE HORRIBLE pain which is a result of cancer in its last stages before death has been wiped out in one patient with small electric currents sent through the deep regions of the brain.

Tiny electric wires, directed three inches into the brain through small holes in the skull, carried the currents to the region below the cerebral cortex, which is where our learning and planning activities take place. One small jolt of the current, two milliamperes, instantly cleared away the pain.

A movie of the process was shown to science writers on a tour of cancer research centers by Dr. Robert G. Heath, professor of psychiatry and neurology at Tulane University, New Orleans. Two hours before the movie was shot, the patient, suffering from incurable cancer of the uterine cervix, had been given a large dose of morphine. Yet her features were drawn and suffering with pain. The instant the current was applied she felt relief.

"I feel wonderful," she said. "I feel like getting up and cleaning up the whole hospital."

The effect of the first small jolt lasted about two weeks. Since then, about two months ago, she has had the treatment about every four days to one week. Down to only 75 pounds in weight, unable to move from her bed before the treatment was begun, now she is up to 81 pounds, is walking around the hospital ward and hopes to be allowed out of the hospital to go to a movie soon.

Dr. Heath emphasized that this was entirely different from another method used on the brain of intractable pain sufferers. The other method, called a prefrontal lobotomy, cuts away from the rest of the brain that part which can look into the future. Since much of what we call pain is actually anticipation of the next twinge, after this operation the pain still exists, but the patient no longer cares about it. However, he no longer cares very much about anything else, either.

On the other hand, Dr. Heath's patient has had no part of her brain damaged or cut off from operation. What he is trying to do, he explained, is to find a connection between the emotion of pain and what kind of chemical changes go on in the body when we feel that emotion. With his electric current, he has stimulated the deep regions of the brain. Chemically, he has achieved a reaction much similar to that with which the body responds to fear. In his patient the output of the hormones from the adrenal cortex was considerably increased after application of the electric jolts. The activity of one part of the brain,

as measured electrically, was also changed, the change lasting as long as the pain stayed away.

When asked whether the treatment had affected the patient's cancer in any way, Dr. Heath said: "I don't know."

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METEOROLOGY

Tornado Birth Caught By Radar Movie Camera

► FOR THE first time, the birth and growth of a Midwestern tornado has been recorded by a radar movie camera.

The movies, taken of the TV-like screen of the radar tracking the storm, were shown to the American Meteorological Society Meeting in Washington. Two striking things were seen in the movie by Glenn E. Stout, senior meteorologist for the Illinois Water Survey which took the movies. First, he said, the tornado, which developed out

of a thunderstorm, started in the rear edge of the storm, rather than the leading edge. Second, just before the tornado developed, the trailing edge of the thunderstorm was sharp and clear, indicating that turbulence existed there.

The tornado developed approximately ten miles north of the radar station at Champaign-Urbana, Ill., on April 9. The radar operator noticed that the thunderstorm developed a sort of tail which then curled into a cyclonic whirlpool.

They found that what they were tracking and photographing was actually a tornado when news flashes told of destruction exactly in the path over which they tracked the curling tail.

Now the movies will be studied in efforts to learn more about the formation of tornadoes and to find some clues for predicting their probable occurrence.

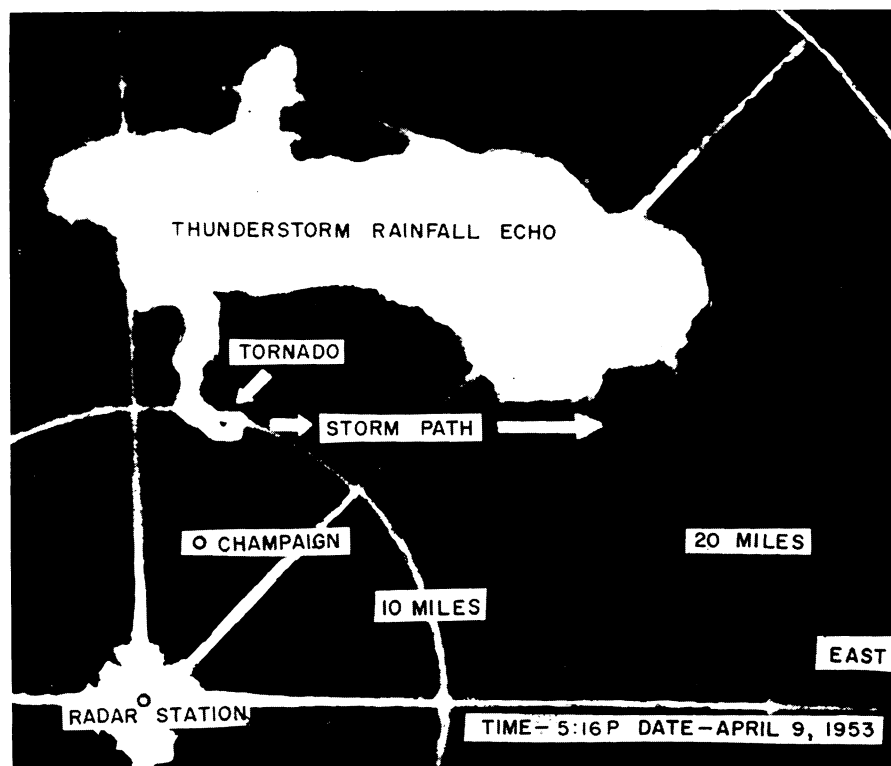
Science News Letter, May 9, 1953

OPHTHALMOLOGY

3-D Movies Find Eye Trouble Never Suspected

► SOME PEOPLE who go to see three-dimensional movies are going to find they have eye trouble they have never suspected. The trouble will not be caused by the motion pictures but detected by them.

"Movies of the type in which either polaroid or colored glasses are worn become



TORNADO ON RADAR—Pictured here is the first radar picture ever taken of a developing midwestern tornado. The projecting tail curled to form the tornado.