

BIOCHEMISTRY

Thalidomide Cancer Cure?

Thalidomide as a possible cancer cure is being tested on both man and animals, but so far results are not outstanding and scientists are not optimistic about success.

➤ THALIDOMIDE, the tranquilizer that eased the sleep of women during pregnancy but exacted a nightmare penalty by causing deformed births, now is being tested on men and animals as a possible cure for cancer. Scientists are not optimistic about success, however.

Researchers in the United States and abroad are seeking to discover if the chemical combination that so horribly inhibits the normal cell and tissue metabolism in human embryo, causing children to be born limbless or with deformed limbs, can inhibit the growth of cancerous cells and tissue.

SCIENCE SERVICE learned that treatment of human cancer victims with thalidomide has been undertaken in Israel. More than 20 cancer patients in Israel have been treated with thalidomide pills for periods up to a month, but thus far no positive results have been reported.

However, the thalidomide testing on human cancer sufferers there will continue since no negative results to prevent further experimental use of the drug have occurred, according to the Israeli researchers at Ein Karem Hospital Center in Jerusalem, and at Tel Hasho-Mir near Tel Aviv.

Thalidomide's usefulness in cancer chemotherapy also is under study in West Germany where it was developed, but there are no indications thus far that it can act against human cancers.

In this country, the use of thalidomide in cancer research has been limited to small experimental animals. Researchers at the National Institutes of Health, Bethesda, Md., who have produced birth defects with thalidomide in laboratory animals, have also tried the drug as a cure for cancerous mice and hamsters.

Their findings, according to Dr. Michael B. Shimkin, director of field studies unit, National Cancer Institute, NIH, do not indicate any spectacular breakthrough in cancer chemotherapy with thalidomide. Thalidomide is, in fact, less effective than other drugs known to be metabolic inhibitors. One such drug is methotrexate, which is known to interfere effectively with embryonic development causing artificial abortion. It also is a proven cure for choriocarcinoma, a rare type of cancer that occurs only in pregnant women.

Thalidomide has shown some "moderate" degree of effectiveness in inhibiting such cancers artificially induced in hamsters, according to research reported by Dr. Joseph A. DiPaolo of Roswell Park Memorial Institute, Buffalo, N. Y. Dr. Shimkin emphasized, however, that previous studies with other metabolic inhibitors which cured cancers in animals far better than thalidomide did not prove effective on man.

"What proves helpful to animals as far as drugs are concerned is often useless to man," he said.

Dr. Shimkin made it clear that he did not believe research on thalidomide as a cancer cure was warranted by any known results to date. He said its present value is in using it to interfere with embryonic development in experimental animals, thereby expanding man's knowledge of metabolic processes.

Thalidomide administered to paramecia (unicellular animals) at NIH have resulted in metabolic changes. If thalidomide has any value, other than as a sleep inducer, it will be in such research, rather than in cancer studies, Dr. Shamkin said.

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MEDICINE

Suction Replaces Forceps

➤ SUCTION by an apparatus called a vacuum extractor can now replace lacerating forceps promoting the birth of the baby in all but the most difficult cases. In some cases cesarean section can be avoided.

Some 300 hospitals in the U. S., mainly on the East and West Coasts, are using the Swedish-made instrument, shaped like a plumber's suction cup, but made of stainless steel, that sucks up the baby's scalp and holds it firmly through delivery. It has even been applied to the breech when labor is not advancing normally, but opinions differ on this use.

Opinions also differ on whether the

vacuum extractor should be used before the uterus is fully dilated. But forceps have been completely avoided by Dr. Tage Malmstrom of the University of Goteborg, Goteborg, Sweden, who developed the instrument. Out of 2,056 deliveries in one year, Dr. Malmstrom used his vacuum-extractor successfully on 121 patients, the usual proportion experiencing abnormal delivery.

This suction apparatus has been used more widely in Europe, including Russia, and in other parts of the world than in the U. S., but it is gaining acceptance by obstetricians here.

Dr. Jean E. Paquin of Providence Hospital, Washington, D. C., told SCIENCE SERVICE that he had used the vacuum extractor 300 times with complete success. He is against using it on the undilated cervix, however, and said there would always be room for forceps in some cases.

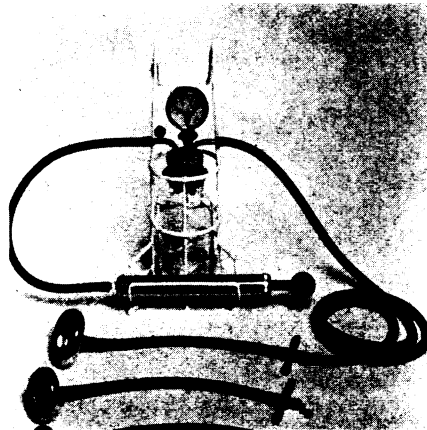
"The greatest benefit is to the mother," Dr. Paquin said, explaining that lacerations had been cut down 90%. Dr. Paquin expects to publish a detailed description of the method soon.

Dr. Moshe Lancet of Kaplan Hospital, Rehovoth, Israel, described his successful use of the suction apparatus on 81 patients in the British Medical Journal, Jan. 19, 1963. Babies examined up to 20 months of age following delivery by the vacuum extractor have been found to be "absolutely normal" except for two unrelated abnormalities due to congenital or infectious causes.

Dr. Lancet has used this instrument directly on the cervix in coordination with the mother's labor contractions, hastening the dilatation even if the cervix was stationary at "incomplete opening for hours." He said no general anesthesia was needed.

The cost of the vacuum extractor in the U. S. is \$169 through the AGA Corporation of South Plainfield, N. J., which maintains an office in Stockholm, Sweden, where manufacturing is done.

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AGA Corporation of America

VACUUM EXTRACTOR—The new suction apparatus shown can be used in place of forceps for baby's delivery.

MEDICINE

Turkish Skin Disease Still Persists in Some

➤ SOME PATIENTS are still affected by the skin disease that struck 3,000 Turkish peasants who ate wheat treated with the fungicide, hexachlorobenzene, from 1955 to 1959. Drs. C. Cam of the State Hospital in Diyarbakir, Turkey, and G. Nigogosyan of the Roswell Park Memorial Institute, Buffalo, N. Y., reported studies on 348 patients so affected in the Journal of the American Medical Association, 183:88, 1963.

No new cases have appeared since 1959, when the use of hexachlorobenzene was discontinued.

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