News
Office of Medical Information
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February 14, 1992

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****Taxol tested for children who don't respond to other cancer therapies

DALLAS -- Pediatric oncologists at The University of Texas Southwestern Medical Center at Dallas are administering the experimental cancer drug Taxol to children whose cancers do not respond to other treatments. A phase I trial is under way at several sites around the United States, including Children's Medical Center of Dallas, UT Southwestern's primary pediatric teaching hospital.

So far eight children in the United States, including two teen-agers at Children's, have received infusions of Taxol. Both of the patients at Children's have had positive responses to the drug. One of the teen-agers has liver cancer, for which there is no effective treatment. This patient has had a decrease in tumor size. The other patient, who has a form of bone cancer, has had less joint pain.

Heading this National Cancer Institute-sponsored trial are Drs. Barton Kamen, professor of pediatrics and pharmacology and Steven Weitman, a pediatric hematology/oncology fellow who will join the UT Southwestern faculty in July. Patients aged 1 through 21 who have solid tumors that are unresponsive to other treatments are eligible to enter the trial. The drug is free, but parents will have to pay other standard costs associated with chemotherapy treatment.

"As a physician, you hesitate to administer a drug to children

(More)

that's still being tested on adults, but these are kids who have no other choice," Weitman said, "We know what the outcome will be if we don't treat them.

"On the other hand, for kids who have been treated for years with other drugs, the chances are slim that this drug is suddenly going to take care of the cancer, but we offer it as an option to the parents. Some of the parents are willing to go with it, and we are pleased to see the responses that we've had."

For their first infusion, based on their body weight and size, children in the UT Southwestern trial received about 80 percent of the maximum dose commonly administered to adults. The side effects after the first infusion were minimal, Weitman said, generally limited to nausea, immune suppression and temporary numbness in the hands and feet. Based on the severity of the side effects, Weitman believes the children can probably receive the same dosage as adults.

The drug is slowly infused over 24 hours. This method was chosen after adult trials that relied on quick infusion produced anaphylactic shock in reaction to the liquid carrier mixed with the drug.

Taxol has produced positive results in some adult patients with lung carcinomas and breast and ovarian tumors. It is still being tested on a number of other cancers in adults, including melanoma and leukemia.

Taxol is produced from the bark of the western yew tree. It takes about 20,000 pounds of bark to produce one kilogram of Taxol. The U.S. Forest Service has approved the harvesting of 38,000 yew trees per year for cancer research. The drug appears to halt tumor

cell growth by preventing cell division and stimulating tumor cell death.

"One of our greatest fears is that we will discover that this drug can be used for a variety of cancers, and we won't have enough of the drug," said Weitman.

Researchers at Bristol-Meyers Squibb, the makers of Taxol, and other American pharmaceutical companies estimate that it will take five years to produce a synthetic form of the drug. One French firm has already produced a semi-synthetic version called Taxotere and is testing it in humans, according to Kamen.

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NOTE: The University of Texas Southwestern Medical Center at Dallas comprises Southwestern Medical School, Southwestern Graduate School of Biomedical Sciences, Southwestern Allied Health Sciences School, affiliated teaching hospitals and outpatient clinics.