

New treatment aids in cancer survival

A new combination of chemotherapeutic drugs, radiation and minor surgery can double the survival rate of patients afflicted with an extremely aggressive, and often fatal, form of cancer, according to scientists at the National Cancer Institute (NCI).

Soft tissue sarcoma spreads from muscle, fat, nerve and connective tissue in the arms and legs to the lungs with brutal speed. In the past, amputation of the affected limb was the most common means of treatment. Its victims were generally young and short-lived, with only 40 percent surviving longer than five years.

This new, three-pronged sequential attack has achieved a 93 percent survival rate over three years, researcher Steven A. Rosenberg, chief of surgery at the NCI, recently told a scientific advisory committee at the National Institutes of Health in Bethesda, Md. Survival rate over five years is expected to surpass 80 percent. Of the 107 individuals involved in the institute's two separate studies, only one in five pa-

tients underwent amputation. Thus the quality and not merely duration of life is improved.

The concept behind this all-out attack is hardly new; combination therapy has been making medical headlines for more than 15 years. Acute lymphocytic leukemia and advanced Hodgkin's disease are particularly responsive to this approach. But for the 5,000 individuals afflicted each year by soft tissue sarcoma, dismemberment was status quo. "Standard treatment was just not to use anything," Rosenberg told SCIENCE NEWS.

Rosenberg's conservative approach to surgery—removing the tumor, rather than the whole limb—is also part of a larger medical trend. Several recent studies of other types of cancers have indicated that less radical surgery, when the disease is diagnosed relatively early, can prevent both recurrence and crippling deformities.

Rosenberg credits the specific combination of chemotherapeutic drugs—doxorubin hydrochloride (Adriamycin), cyclophosphamide and methotrexate—with the study's success. Early diagnosis and prompt surgery were also essential ingredients to the therapeutic success. □

Toxic shock data question CDC stats

Toxic shock syndrome is a news media disease, with the rate of patient-reported incidents rising and falling in proportion to publicity, says Michael Osterholm, chief of Minnesota's acute disease epidemiology section.

The number of cases of disease reported through active surveillance by Minnesota doctors and medical centers has remained constant throughout the past 18 months, Osterholm told the Oct. 2 meeting of the American Society for Microbiology in Iowa City, Iowa. In contrast, the number of cases counted by the federal Centers for Disease Control, which relies on patients to report themselves, skyrocketed during the September and October 1980 media blitz and has declined ever since.

"This phenomenon is typical for infectious disease. One single news report of hepatitis can bring on a 200 to 300 percent increase in the number of reported cases of hepatitis during the following several weeks," Osterholm told SCIENCE NEWS.

Physicians using active surveillance in the Madison, Wis., area also report a constant number of toxic shock cases.

The CDC attributes the changing statistics not to publicity, but to the removal of Rely tampons from the market. Last July, CDC officials linked the disease to tampons; by September, they identified Rely as the culprit. Proctor and Gamble Inc., which has been conducting nationwide surveillance, says its findings support Osterholm's and contradict CDC data.

Osterholm blames not one specific brand of tampon, but high-absorbency tampons in general. Absorbent tampons account for only 25 percent of the market in Minnesota but have been implicated in 40 to 50 percent of the state's cases of toxic shock syndrome. Researchers speculate that toxic shock syndrome is not a new observation of an old disease, but instead is related to a change in tampon design. The more absorbent tampons can produce a back flow of menstrual blood into the peritoneal cavity. When this blood contains *Staphylococcus aureus*, bacteria back flow and subsequent absorption of bacterial toxins can be fatal.

Because the Rely brand comprised the major portion of the high-absorbency tampon market, it is logical that it would be responsible for a higher incidence of toxic shock syndrome, says Osterholm. Minnesota women switched to three other high-absorbency brands when Rely was removed from the market. Tampax tampons, at first responsible for only 12.9 percent of cases, are now linked to 45 percent. Incidence of disease with use of Playtex tampons has climbed from 20.4 percent to 31 percent and with use of Kotex, 3.7 percent to 13.7 percent. □

Zebu imports to beef up U.S. cattle



U.S. Dept. of Agriculture

Herd of cattle may look quite different once there is a Zebu in the family. Breeders hope to improve U.S. cattle by cross breeding domestic animals with this Indian cattle, which has a darkly pigmented loose hide, thick hair, long horns, humped back and a large fold of skin, the "dewlap," under its neck. The Zebu's desirable traits include resistance to tick infestation, hot weather and certain diseases. Zebus, which are raised in Brazil, were not previously available in the United States because cattle imports are prohibited from countries with infestations of certain animal diseases. The recent Zebu imports were quarantined first in Brazil, then a mile off Brazil's mainland, then on an island off Key West, Fla. A battery of tests at each station selected out animals that had been exposed to specific diseases. Of 744 animals selected in Brazil, 141 were eventually imported after 8 months of quarantine. The importation system, with its extensive testing, may serve as a model for importing animals from other parts of the world.