Breast cancer treatment

The rate of breast cancer recurrence after initial surgery has been decreased with drug therapy in a study conducted by Dr. Gianni Bonadonna and co-workers at the Instituto Nazionale Tumori, Milan, Italy.

The Milan investigators reported preliminary findings of their study, supported by HEW's National Cancer Institute, in today's issue of the New England Journal of Medicine.

The scientists used a combination of drugs—cyclophosphamide, methtrexate and 5-fluorouracil (CMF)—as a program of adjuvant chemotherapy in breast cancer patients.

Adjuvant chemotherapy is the use of anticancer drugs along with surgery as the primary treatment of cancer patients at high risk of recurrence.

At 27 months, since the beginning of the study, only 5.3 percent of the women who received CMF have had a recurrence of the disease. In contrast, 24 percent of a control group of women who did not receive CMF experienced a recurrence. The patients in the study have been followed for an average of 14 months.

"The results from Milan are encouraging; they will provide the basis for a combined approach to treatment of breast cancer with involved lymph nodes," Frank J. Rauscher, Jr., Ph.D., Director of the National Cancer Institute said.

"This study—in conjunction with the earlier NSABP study using a single drug (L-PAM) following surgery in a similar group of women—supports the rationale for applying drugs early in the treatment of cancer to destroy microscopic tumor cells that may have spread to distant parts of the body."

Women selected for the study had undergone a radical or extended radical mastectomy (removal of a breast, underlying muscles, and axillary lymph nodes under the arm) and had been found to have cancer cells in one or more of the lymph nodes.

Involvement of the axillary nodes is an indicator of the woman's likelihood of long-term survival. The average five-year survival rate is 84 percent for women in whom the breast cancer has not spread into the axillary nodes. The survival rate is 45 percent if the lymph nodes are involved.

In addition, the women in the study were less than 75 years of age, not pregnant and wer eliving near the institute so that they would be able to continue their treatment. The women were entered at random into two groups.

One group began the CMF treatment program two to four weeks after surgery. The other, or control, group received no additional treatment beyond the mastectomy.

Patients in the two groups were also compared according to age (age 49 and younger or age 50 to 75 years), number of axillary nodes involved (one to three or four or more) and the type of mastectomy—radical or extended.

The women who received the drugs ere given CMF in 12 cycles of four weeks each, or for a total of one year. The drugs were given over a two-week period, followed by two weeks without drugs to permit the body to recover from toxic side-effects of the medicine.

Toxic effects observed in the patients included nausea and vomiting, which lessened as the treatment progressed, suppression of the bone marrow, and a decrease in the number of white blood cells in circulation.

Some patients experienced a partial or total loss of hair during treatment. About half of the premenopausal women ceased menstruation, an indication of sterility. This proved to be temporary in some of the women, but it is not yet known whether all of the patients will regain their fertility.

At the time of the report, cancer had recurred in 43, or 24 percent of the 179 women of the control group and in 11, or 5.3 percent of the 207 women in the group receiving CMF. The reduced rate of recurrence with CMF was seen with both pre- and postmenopausal patients.

The scientists noted that the study has not been going on long enough to determine whether the actual survival rates of the patients will be increased by the three-drug treatment. Long-term side-effects of prolonged chemotherapy also remain unknown.

The National Cancer Institutie is a bureau of the National Institutes of Health, one of six agencies with the U.S. Public Health Service.