

Emerging Science

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Analysis of and Improvements in Chemotherapy Approaches for Gastrointestinal Cancer at Kitasato University East Hospital in Japan, Based on Comparison With the University of Texas M. D. Anderson Cancer Center in the United States

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Background: In Japan, the administration of chemotherapy for patients with gastrointestinal cancer has become more common, and treatment venues have expanded beyond hospitals to also include outpatient clinics and patients' homes. Kitasato University East Hospital (KUEH), in Japan, needs to improve its procedures to adapt to these changes. Using results of a comparison of treatment approaches used at KUEH vs. at the University of Texas M. D. Anderson Cancer Center (MDACC), in Houston, Texas, USA, we considered remedial measures for chemotherapy approaches in the Gastrointestinal Treatment Center in KUEH.

Currently at KUEH, 89 varieties of chemotherapies are administered for patients with esophageal, gastric, liver, biliary tract, pancreatic, colorectal, and malignant lymphoma gastrointestinal cancers. Of those regimens, 25 were being assessed in clinical studies; 15 of the protocols were investigator-initiated and 10 protocols were sponsored by pharmaceutical companies. Twenty-nine of the 89 regimens included oral preparations such as S-1, doxifluridine, tegafur-uracil (UFT), and investigational drugs. The oral medications were almost always co-administered with intravenous anticancer agents.

Methods: First, we discussed data derived from a comparison of the two institutions. These data were based on a study of systems in place at the Gastrointestinal Medical Oncology Department and other cooperating departments at MDACC. Three of the authors from KUEH (M.S., W.K., and C.S.) had visited MDACC for approximately 3 weeks, from January 17 to February 10, 2006.

Second, we analyzed accumulated information about chemotherapies used at KUEH and issues related to procedures and administration of these agents. Subsequent to the analysis, we reassessed the circumstances at KUEH to determine what improvements could be made.

Results: We identified improvements that were needed at KUEH based on the comparison of treatment approaches at MDACC and KUEH, and the analysis of procedures at KUEH. Improvements are needed in terms of education for staff and patients, as well as better organization of information to increase understanding of chemotherapies/regimens and how to manage adverse reactions. In addition, specific criteria are needed for chemotherapy administration and for obtaining consent from patients treated by “off-study regimens,” which accounted for 71.9% of all regimens used at KUEH. For the “on-study regimens,” specific criteria were outlined within each protocol, and written consent was required from patients who were to receive the treatments.

Conclusions: Approaches used at KUEH in the treatment of patients with gastrointestinal malignancies need to be improved from current practices. Standardized procedures are needed, including accurate information to reinforce safety in

administering the wide variety of chemotherapies and complex regimens, particularly for “off-study regimens.”

In May 2006, KUEH organized a committee to address these issues and develop an improvement plan. In February 2007, the committee organized information associated with chemotherapies used at KUEH and modified the interdepartmental checking system between physicians, nurses, and pharmacists. This new system has been applied to all regimens since March 2007. In October 2006, the committee developed the first edition of chemotherapy guidelines for patients treated at KUEH. In August 2007, the committee revised the guidelines, including that all patients who are to receive “off-study regimens” sign a uniform written consent form, the use of standardized chemotherapy administration procedures, and that patients receive information about their treatments.