Division of Clinical Pharmacology and Therapeutics

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General Summary

The Division of Clinical Pharmacology and Therapeutics was established in July 1995. The aim of the division is to investigate drug treatment in internal medicine, whereas other departments of clinical pharmacology in Japan focus on registration trials, particularly phase I trials. Although evidence-based medicine has been advocated for the past 10 years, most of the evidence has come from the United States and Europe. We have performed a pilot study for a large-scale clinical trial of the treatment of hypertension to obtain evidence in the Japanese population. With the evolution of pharmacogenomics, our recent research activities in humans have focused on the relationship between drug effects and gene polymorphisms.

Research Activities

An important issue of medicine in the 21st century is to distinguish patients who are responsive and who are unresponsive and to distinguish patients who show and who do not show adverse reactions to drugs. We started a collaborative study with other institutions to examine the relationship between polymorphisms of genes of drug-metabolizing enzyme and the effects of drugs on inhabitants of an isolated island.
We have analyzed drug-metabolizing enzymes CYP2C9 and CYP2C19. Some of our results have already been applied to drug therapy.
In the treatment of hypertension, calcium channel blockers have been used in more than 70% patients in Japan. That drugs of this class reduce cardiovascular events by lowering blood pressure has only recently been confirmed in Europe and the United States. However, because cardiovascular events differ by ethnicity, confirmation in a Japanese population is mandatory. Therefore, we planned a large-scale clinical trial (Optimal Combination of Effective Antihypertensives Study) to find the best agent to use with the calcium channel blocker amlodopine. A pilot study has been completed. To obtain a sufficient sample size, we performed this study in collaboration with a Chinese group.
We introduced site visits to a drug company and an institution for phase I trials for 3rd-year students assigned to our division. Although information on these sites is not included in the current medical education system, the visits were well received by students.
Since the introduction of the new good clinical practice (GCP) guidelines, clinical trials of new drugs in Japan have encountered many problems. An administrative office for registration trials was established in the hospital in February 1999, and the system for registration trials in the hospital has been reformed to meet the demands of the new GCP. Seven clinical research coordinators (CRCs), six nurses, and a pharmacist now facilitate clinical trials. The CRC have started to assist investigator-initiated trials as

well as registration trials. CRCs were introduced for all registration trials in 2004; the quality and speed of these trials were much improved. Efforts have been made both inside and outside the university to resolve problems of registration trials for developing new drugs.

I have been working as a principal investigator of the GCP study group organized by the Ministry of Health, Labour and Welfare to improve clinical trial systems.

Publications

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