

Editorial

Wish to Progress "Clinical Pharmacognosy" in Japan

"Pharmacognosy" is one of research fields in pharmaceutical science. But the characteristics of pharmacognosy are slightly different between United States and Japan. In Japan, crude drugs such as medicinal plants, minerals or fossils, named "natural medicines", have been used as the component of traditional medicines. Since crude drugs are "medicines", their quality control is necessary, and the pharmacognosy has been developed to make the quality control of crude drugs more efficient by employing microscopic histology, quantifying the contents of marker compounds, or identifying the genes of the plants, etc. In the United States, crude drugs have not been recognized as "medicines" from more than 100 years ago. Since they are "crude", the only active ingredients containing in crude drugs, that are usually explained as pure substances or chemical compounds, have been considered as "medicine". Therefore, the techniques for quality control of crude drugs have been no need, and the isolation of chemical compounds from crude drugs has been developed in the pharmacognosy in United States. Until now, a lot of useful chemical compounds are isolated from crude drugs, and more than 70% of medicines have been developed from natural sources with or without chemical modification.

Over the past several years in the United States, crude drugs are recognized as dietary supplements, and have come to contribute to the public health. Crude drugs that have relatively strong pharmacological activity and are recognized as drastic medicine in Japan are also commercially available as functional food in the market in US. Since dietary supplements are not "medicine" but food, and are only regulated under the quality control for food sanitation, coarse products are sometimes distributed in the market, e.g. the products using wrong plant materials, containing or foreign substances or no active ingredients, exhibiting highly variation among lot-to-lot, etc. These problems have been already settled in Japanese market for crude drugs, where these materials are regulated as "medicine". It is considered that the Japanese-style pharmacognosy is now getting more important to use crude drugs as dietary supplements in United States.

On the other hand, "clinical pharmacognosy" is slightly behind in Japan. In United States, the principle "clinical pharmacy" is enormously ingrained in hospitals and pharmacies, and since many patients are actually using crude drugs as dietary supplements, physicians and pharmacists have to handle them in order to make their beneficial evidences by clinical trials or to protect patients from their adverse effects. A workshop on clinical pharmacognosy was held in the meeting of American Society of Pharmacognosy in 2007, and they have discussed to solve above problems for crude drugs. The culture of clinical pharmacy has recently been become popular in Japan, and the several approaches are just now being conducted for chemical drugs by trials and errors. Japanese physicians and pharmacists have to learn and develop clinical pharmacognosy from United States, since they have more excellent techniques for the quality control of crude drugs.

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