제 6차 임상약리학회 추계학술대회

Relevance of Ethnic Factors in Global Development of New Medicines

Chikayuki Naito, M.D., Ph.D.

Senior Technical Adviser, The Organization for Drug ADR Relief, R & D Promotion and Product Review, and Councilor, Tokyo Teishin Hospital

Although the world has been changing and developing very rapidly, a new drug development still needs time-consuming, pains-taking and long-standing efforts together with a tremendous amount of money expenditure. In that circumstances, the idea of ICH, International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use, came out in 1990 among the three regions, USA, EU and Japan. The principal objective of ICH is to expedite the global development and availability of new medicines to patients without sacrificing safeguards on quality, safety and efficacy, but avoiding unnecessary and redundant repetition of experiments and trials. Greater mutual acceptance of research and development procedures could lead to a more economical use of human, animal and material resources.

Ethnic factors in a broad sense have been regarded as one of the unavoidable reasons to constitute some barriers to the acceptance of foreign clinical data. Ethnic factors are defined as intrinsic characteristics of the drug recipient and extrinsic characteristics associated with the environment and culture in which the subjects live.

Retrospective comparisons of pharmacokinetic data between the three regions showed that the ADME data were similar for most medicines, especially if corrected for body weight. Finally, we reached the conclusion that inter-ethnic differences were no larger than intra-ethnic variations in most medicines, with reservation that there might be a few exceptions.

When we adopted the 'triage' concept and a little later also the 'bridging study' concept, we could make a further progress in the discussions. However, lately the triage concept has been replaced with 'a complete data package concept'.

All data in the clinical data package, including foreign data, should meet the standards of the new region with respect to its study design and conduct and the available data should be complete to the satisfaction of the new region. Additional studies which can be conducted in any region may be required by the regulatory authority of the new region to complete the clinical data package.

The bridging study concept has been brought up mainly to overcome the difficulties inherent to Phase III

studies due to extrinsic factors caused by different ethnicity.

However, the bridging study is now defined as a study performed in the new region to provide pharmacodynamic or clinical data on efficacy, safety, dosage and dose regimen in the new region that will allow extrapolation of the foreign clinical data package to the population in the new region. There are two kinds of bridging studies: one for efficacy, and the other for safety.

A data package which is submitted to the regional regulatory authority for a marketing approval is named as 'a bridging data package'. Thus, a bridging data package consists of: 1) information from the foreign clinical data package that is relevant to the population of the new region, including pharmacokinetic data, and any preliminary pharmacodynamic and dose-response data, and 2) if needed, a bridging study to extrapolate the foreign efficacy data and/or safety data to the new region.

We hope and believe that during the periods until we will have more information and experiences in the variations caused by ethnic differences, especially by extrinsic factors, the guidance elaborated by Expert Working Group of E 5 of ICH will serve to help greatly advancement in acceptance of foreign clinical data.