

## Development of new comprehensive medication consultation supporting system with database

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### ABSTRACT

**Objective :** Personalized medication consultations by pharmacists are important for the effective and safe use of medicines. When patients consult pharmacists about medication, pharmacists should explain to them how to take their medicines and the nature of potential adverse drug reactions in a language that is clear and understandable to the patient; moreover, in a specific situation faced with patient complaints pharmacists are required to take all necessary safety measures to prevent any further adverse drug reactions based on the information about patients' complaints and background. Accordingly, we thought that it would be beneficial to construct a medication consultation support system to allow pharmacists to carry out appropriate medication consultations, without specific consideration of the pharmacist's experience.

**Design :** A comprehensive medication consultation support system was designed, to assist pharmacists during various stages of medical consultation, such as checking the prescribed medicines, provision of appropriate information and recording of patient's medication history.

**Methods :** 1) The necessary functions in the support system which would be useful at various stages of medical consultation by pharmacists, were examined. 2) To offer information regarding adverse drug reactions in language that is understandable to the patient, we produced a database using an early symptom of adverse drug reactions. 3) We constructed a new comprehensive medication consultation support system and installed it with the database of early symptoms of adverse drug reactions in a language that is understandable to patients.

**Results :** This system covers almost all of the prescription drugs in Japan and helps pharmacists at various stages of their medical consultation. Therefore, it enhances the pharmacist's understanding of each patient's condition, such as disease state, medicines taken, lifestyle, proper guidance to be given and it also offers proper guidance about adverse drug reactions in a language that is understandable to the patient to identify any adverse drug reactions at an early stage.

**Conclusion :** It is expected that pharmacists will be able to provide appropriate medical advice for each individual patient and thus many patients will recognize the merit of separating the prescribing and dispensing of drugs, when pharmacists can effectively use this medical consultation support system.

**Key words :** Clinical Pharmacy Information Systems, Drug Information Services, Adverse effects