

Support System for Early Detection of Adverse Effects through Subjective Complaints

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Abstract :

Objective At present an appropriate support system to detect adverse effects of prescribing multiple medications to patients at an early stage does not exist anywhere including Japan. This study was conducted using patient's subjective complaints of adverse effects when they were administered multiple medications. To establish this prompt detection system is useful for both patients and healthcare professionals.

Design A model of the prototype system, which allows both patients and healthcare professionals to detect adverse effects obtained from the information, such as complaints and conditions of patients, and prescribing medications, was designed.

Methods

- 1) Five active ingredients (furosemide, nifedipine, digoxin, diltiazem, and benzbromarone) in the "Essential Information for Safe and Effective Use of Drugs" (EISEUD) were selected for development of a prototype system. Subjective complaints appearing in EISEUD were combined with the adverse effects in the package inserts.
- 2) To list up the order of severity of adverse effects in patients, each adverse effects was scored with the order of severity documented in the package inserts. On the other hand, extra points were added according to the physical condition of patient.
- 3) From the basic data obtained above, a model system to assess severity of adverse effects is presented in this study.

Results The results indicate the feasibility of designing a system that allows assessment by both patients and healthcare professionals. This system can be utilized to judge whether patient's subjective complaints correlated with adverse effects from administered medications, and to detect these adverse effects in order of severity. This outcome can be provided to patients as a self-monitoring list. This list provides adverse effects in patient's understandable language and in order of severity. The results also indicate that adding the degree of severity and the physical condition of the patient as factors for analysis can yield additional information, such as relative urgency of seeking medical attention.

Conclusion It is meaningful to establish an early evaluation system for adverse medicinal effect such as the one presented in this study because many patients in Japan are administered multiple medications. Furthermore establishment of this system might be useful in supporting both patients and healthcare professionals.

Keywords : early detection of adverse effects; subjective complaints; scoring system; multiple medications; self-monitoring list for patients.