Evaluation of medication error incidence rate in medical ICU of Shahid Faghihi hospital

M. Fereidooni[*], A. Vazin

Departement of Clinical Pharmacy, Faculty of Pharmacy, Shiraz University of Medical Sciences, Shiraz, I.R. Iran.

Background and Amis: On average 1.7 medical error per day occurred for patients in critical care units. The most common medial errors in ICU are medication errors and they account for 78% of serious medical errors. Detection of medication error frequency is very important to prevent medication errors. Therefore the goal of this study was to reveal the frequency, type and consequences of all type of errors in an ICU of a large teaching hospital.

Methods: The occurrence of errors was detected with disguised direct observation method. One pharmacy student observed 307 doses in 46 6hr- shifts. In each shift of observation, the observer selected one patient, and considered patient's written order and then followed the nurses preparing and administering drugs. All the observations were noted on a data collection form designed especially for the study. Data were analyzed in SPSS version 17.

Results: In 307 doses 245 (79.8%) medication errors were identified, (53.1% administration errors, 24.1% prescription errors and 2.6% transcription errors). MEs occur most often at the stages of administration-technique (20.84%) and monitoring (16.67%). about 85% of errors in all stages lead to no harmful effects.

Conclusions: the most common MEs in this ICU were administration and prescription respectively with wrong administration technique and inappropriate monitoring of medications were the most common administration and prescription error types. Involvement of pharmacy department on drug preparation instead of preparation of drug admixtures by the nurses, using protocols for IV infusion in the ICU, also providing equipment and trained personnel for TDM and measuring medications level is necessary in order to improve quality of care in ICU.

Keywords: Medication error; Intensive Care Unit (ICU); Pharmacist; Iran