Japan Council for Quality Health Care

Project to Collect Medical Near-Miss/ Adverse Event Information

Medical Safety Information

No.9, August 2007

Confusion between total product amount and content of active ingredient

Four cases of confusion between total product amount and content of active ingredient were reported. (information collection period, from October 1, 2004 to March 31, 2007; the infomation is partly included in "Medical Adverse Event Information to Be Shared" in the 8th Report)

Cases of overdose being administered as a result of confusion between total product amount and content of active ingredient on prescriptions for oral drug have been reported.

Instruction description

Selenica-R Granules 40% Note) **1250mg a day**

The order intended by the physician

The amount of active ingredient

Intended prescription of

500mg a day (1250X0.4)

∴Total amount of the preparation = 1250 mg

The interpretation of the order by the pharmacist

The amount of active ingredient

Interpreted as a prescription of

1250mg a day

∴Total amount of the preparation = 3125 mg (1250/0.4)

Note) The active ingredient; sodium valproate.

<Drugs for which there were similar reports> Aleviatin powder 10%, Phenobal powder 10%, etc.

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Case 1

An oral drug prescription of "Selenica-R 1.25g 2 parts morning/evening" (equivalent to 500mg of the active ingredient sodium valproate) was described on a drug information form provided for a patient admitted from another hospital. Intending to prescribe the same contents, the physician entered "Selenica-R Granules 40% 400mg/g 1250mg, after breakfast/dinner" into an order screen and issued a prescription. On the other hand, the extramural pharmacy that received the prescription interpreted the 1250mg not as the total volume of the formula, but as the volume of active ingredient (sodium valproate) and prepared the prescription of Selenica-R granular 40% in a total volume of 3125 mg. The overdosage was discovered by an inquiry from a family member when the patient suffered from vomiting.

Case 2

A patient came to an outpatient ward for examination manifesting symptoms severe enough that the patient was inarticulate. The primary physician suspected the drugs prescribed three weeks earlier at another hospital as the cause of the symptoms and verified again the contents of the prescription. As a result, it was discovered that the another hospital prescribed 150 mg/day of phenobarbital as active ingredient, while the hospital in question, prescribed 10 times of the amount, i.e. 1500 mg/day. The reason for this was because the primary physician read the drug notes brought in by the patient where the prescription read "Phenobal powder 10% 1.5 g/day", however, prescribed “Phenobal powder 10% 1500 mg/day" intending to issue the same prescription. According to the convention at pharmacy division of the hospital, when volumes are displayed in "g," this refers to the total volume of the prescription, and when volumes were displayed in "mg," this refers to the volume of active ingredient. During preparation of the prescription, the pharmacist interpreted the volume of active ingredient to be 1500 mg, because the prescription was described in "mg".

Preventive measures taken at the medical institutions in which the events occurred.

Establish descriptive rules for prescription and note to whether the amount in description is active ingredient or total amount.

* As part of the Project to Collect Medical Near-Miss/Adverse Event Information (a Ministry of Health, Labour and Welfare grant project), this medical safety information was prepared based on the cases collected in the Project as well as on opinions of “Comprehensive Evaluation Panel” to prevent occurrence and recurrence of medical adverse events. See quarterly reports and annual reports posted on the Japan Council for Quality Health Care website for details of the Project. http://www.med-safe.jp/
* Accuracy of information was ensured at the time of preparation but can not be guaranteed in the future.
* This information is neither for limiting the discretion of healthcare providers nor for imposing certain obligations or responsibilities on them.

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