Japan Council for Quality Health Care

Project to Collect Medical Near-Miss/ Adverse Event Information

Medical Safety Information

Medical Safety Information released from 2006 to 2009

No.55, June 2011

Cases similar to those published in Medical Safety Information bulletins in 2006-2009 were reported again in 2010.

No.[1)]	Title -Description-	Number of cases reported in 2010
	[Case]	
No.1	**Misconception of insulin content** – Cases resulting in hypoglycemia due to overdose, associated with the misconception of the display "100units/mL" on the vial –	1

The physician ordered as "Humulin R 50units + normal saline 50mL (1unit = 1mL) 1mL/h" for insulin intravenous continuous administration. Nurse A saw the description of the prescription of "Humulin R 100units /mL 50units," and misunderstood "100units /mL" as "100units 10mL," and calculated as "50units as 5mL." The prescription and medicine were confirmed with Nurse B, but Nurse B lacked experience in preparing the order, so made preparations and started as is. Three and a half hours later, blood glucose level of the patient was 51mg/dL, it was ascertained that the patient had been coinjected with insulin 5mL (500units).

No.2	**Bone marrow suppression due to antirheumatic (Methotrexate) overdose** – Cases resulting in bone marrow suppression due to antirheumatic (Methotrexate) overdose –	2

The physician began administration of Rheumatrex capsules to a patient for rheumatoid arthritis. The physician did not enter the designated days of administration for the week, and erroneously entered 21-days continuous administration. The correct prescription should have been three days, once in a week. A simple verbal explanation that the drug was to be taken once a week was given to the patient, and the prescription was issued. No issues were inquired about the prescription at the external pharmacy as well, nor an explanation regarding administration method. The patient administered Rheumatrex capsules everyday as prescribed. The patient discontinued the administration at his/her own judgment, because symptoms such as gingival bleeding, occurred. The primary physician noticed the prescription error, when the patient visited the hospital three weeks later. (There was another similar case occurred after Medical Safety Information No.45 (August 2010) 1st follow-up report was provided.)

No.3	**Rectal perforation associated with glycerin enema** – Cases of suffering rectal perforation, etc., associated with glycerin enema –	5

Disimpaction was carried out for the patient, but there was insufficient bearing down, so a glycerin enema was performed with the patient in a bending position in the toilet. A melena occurred afterwards and continued until the following morning. (There were four other similar cases)

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No.[1)]	Title -Description-	Number of cases reported in 2010
	[Case]	
No.4	**Drug mix-up** – Cases of mix-up due to similarity in drug names –	1
	The physician entered an order for normal saline 100mL + Methycobal 1A + Neurotropin 1A on the electronic medical chart for a patient who visited the emergency outpatient department. The pharmacist sent normal saline 100mL, Methycobal, and Neutrogin. The nurse, after mixing the injection, noticed that the ordered injection and the name of the drug differed, and confirmed this with the physician. The physician said "it is alright," without confirming the vial, so the nurse thought that the similar name was for a generic drug and mixed it with the infusion, and administered it.	
No.5	**Burn during assisted bathing** – Cases of burns due to not checking the hot water temperature just before assisted bathing –	2
	The patient turned on the hot water without noticing that the shower was set at a temperature too hot for patient, and did not check that the shower head was turned directly towards him/her. Hot water approximately 70°C showered on the right shoulder of the patient, resulting in a burn. (There was another similar case)	
No.6	**Misconception of insulin unit** – Cases resulting in hypoglycemia due to insulin overdose, by misunderstanding of "unit" as "mL" –	1
	Nurse A confirmed an order for "4units" of Novolin R with Nurse B, and prepared it by a tuberculin syringe. While Nurse A was injecting insulin into the patient, Nurse C noticed that the syringe exclusive for insulin injection was not being used. When confirmed, the fact that "0.4mL"(=40units) insulin was prepared in tuberculin syringe and was administered.	
No.7	**Extravascular leakage in pediatric patients** – Cases of requiring subsequent treatment because of extravascular leakage when infusion was administered to the pediatric patients, regardless of whether or not the risk of transfusion leakage is described in the package insert –	8
	The physician secured a vessel on the dorsum of left hand of the pediatric patient by 24G catheter. Next, he/she attached a fixation splint and infused Soldem 3A at 35mL/h. The nurse confirmed the drip and condition of the infusion pump every two hours, but the area of infusion administration was covered by bandage, so was not well observed. The following day, swelling of the entire left upper limb and partial white discoloration of dorsum of the left hand were observed when re-securing the splint. (There were seven other similar cases)	
No.8	**Wrong site surgery (right/left)** – Cases of wrong site surgery between right and left –	5
	Physician A confirmed image findings of a patient with a right chronic subdural hematoma, but wrote down "left" on the medical chart and surgery application form. The circulating nurse on duty in the operation room thought the site was left according to the surgery application description. Physician B, who performed the surgery, made an incision in the skin on the left head, although it should have been an incision on the right head. (There were four other similar cases)	

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No.[1)]	Title -Description-	Number of cases reported in 2010
	[Case]	
No.9	**Confusion between total product amount and content of the active ingredient** – Cases of confusing of the total product amount and the content of active ingredient –	2

The primary physician ordered “Phenobal10% 500mg/day for five days,” without knowing the hospital arrangement of using titers for “mg” prescriptions, and triturated powder for “g” prescriptions, when prescribing “10% Phenobarbital powder 0.5g/day” described in the referral form. The electronic medical chart displayed the message of exceeding the usual dose, but the physician confirmed the referral form again, and prescribed it as is. The pharmacist weighed the prescribed medicine and issued “5g, for five days.” The overdose was determined at the next prescription by prescription audit. (There was another similar case.)

No.10	**Magnetic material (e.g.metal products) taken in the MRI room** – Cases of bringing magnetic material (e.g. metal products) in the MRI room –	5

The physician confirmed with the radiological technologist if the pediatric patient had any magnetic material, and then the patient was taken into the MRI room. At the time, whether the infusion stand was non-magnetic material (for MRI) or not was not clarified. When the pediatric patient entered the MRI gantry, the infusion line was pulled. The instant the infusion stand became close to the gantry, it became stuck to the MR device. (There were four other similar cases)

No.11	**Blood transfusion to wrong patient** – Cases where the blood product to be given to the patient was not finally checked when connecting the blood products for a transfusion –	2

Patient A was due to be administered a blood product for transfusion. Originally, when carrying out a blood transfusion, the procedure was to confirm three things - the order, the person carrying out the procedure, and the patient's name band - but Patient A was not wearing a name band. Consequently, instead of the name band, the bar code on the patient registration card was used and was authenticated by nurse B in a location away from where the patient actually was. Subsequently, when administering the blood transfusion to Patient A, the transfusion began to be given to Patient B in the next bed. Immediately after beginning to administer the transfusion, nurse D noticed the error. (There was another similar case)

No.15	**Wrong pick-up of syringe containing drug** – Cases of multiple syringes being prepared for operation or treatment with labels displaying the drug name, but despite this, wrong pick-up of syringe containing drug occurred because these labels were not checked –	1

Nurse A wrote the name of the patient, date, etc., on Heparin Lock solution for Patient B, and after using it, stored the remaining in the tray in the refrigerator. After using Heparin Lock solution for Patient D, Nurse C mistakenly thought the remaining Heparin Lock solution for Patient B was Patient D’s stored in the same tray, and disposed of it without confirming the name, and then stored Heparin Lock solution of Patient D in the tray. After completing infusion to Patient B, Nurse A had administered less than 1mL of Heparin Lock solution which remained in the tray in the refrigerator, without confirming the name of the patient. At that time, the difference in the remaining stored amount was noticed.

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No.[1)]	Title -Description-	Number of cases reported in 2010
	[Case]	
No.17	**Burn during use of a hot water bottle** – Cases of burn during use of hot water bottles –	2
	The nurse prepared hot water bottles, placing them in a cover and wrapping them with a bath towel, and used them to warm the legs of the patient. During the night, the patient complained about lower leg pain. When the nurse checked, an approximately 2cm water blister had formed. (There was another similar case)	
No.19	**Use of unsterile medical supplies** – Cases involving preparation of unsterile medical supplies and wrong use of them –	2
	Nurse A thought the wagon for sterilized supplies was the wagon for supplies before sterilization, and placed an unsterilized container which had a sticker which changes color after sterilization on it. Later, Nurse B took the wagon for sterilized supplies into the sterilized area, and put the container away, without confirming the color change of the sticker. The day before the operation, when a consigned employee prepared the supplies, the sticker was not confirmed. On the day of operation, Scrub Nurse C took out the instruments and opened the container from prepared in the operation room, without confirming the color of the sticker. Circulating Nurse D attached the table to showing the number of instruments for use in surgery which was in the container on the wall of the operation room, but at this time as well, the sticker was not confirmed. One hour after surgery began, Circulating Nurse E noticed that the paper of the table to identify item and its number had not changed to the sterilized condition, and checked the color of the sticker attached to the back of the table to identify item and its number, confirming that the container was not sterilized. (There was another similar case)	
No.20	**Failure to transmit an alteration of instruction** – Case of original instructions being implemented although they were altered, due to the alteration not being transmitted to the related department –	5
	The patient was injected medicine to treat leucopenia, during hospitalization for chemotherapy. Since an increase in white blood cell count was observed, the physician ordered to discontinue the treatment, but did not carry out the discontinuation process for the prescription. The nurse confirmed the increase of white blood cell count from the day before, but did not confirm the order, and as there was a prescription and medicine, assumed that the medicine is to be injected and carried it out. When entering the implementation signature, the nurse then noticed the discontinuation order. (There were four other similar cases)	
No.22	**Wrong prescription related to chemotherapy protocol** – Cases of incorrect prescription related to chemotherapy protocol –	1
	The primary physician prescribed injection medicine for chemotherapy, referring to the chemotherapy handbook protocol, for a patient with esophageal cancer undergoing radiation therapy. The planned protocol was to be the first and second week continuous administration, but the protocol doses at the first and fifth week were referred to and this was continuously administered for two weeks. The mistake was noticed when the physician of another department pointed out the overdose.	
No.23	**Wrong input of units on computerized prescription order entry system** – Cases of overdose due to wrong input of units on computerized prescription order entry system –	4
	Since the patient's blood sample showed high potassium, glucose/insulin treatment was scheduled. The physician did not confirm the units when ordering Humulin R, and ordered "8mL" instead of "8 units," by mistake. The primary nurse never used insulin before, and prepared and administered the dose without sufficient knowledge. Later, hypoglycemia was observed, and the mistake in the order was noticed. (There were three other similar cases)	

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No.[1)]	Title -Description-	Number of cases reported in 2010
	[Case]	
No.24	**Tubing misconnection of ventilator circuit** – Cases of the tubing misconnection of ventilator circuit –	1
	The physician attached a ventilator assembled by the Clinical Engineer to a patient returning from the operation room with endotracheal intubation. On the following day, distilled water in the humidifier had decreased, but there was no water drip observed inside the circuit. Upon confirmation of the circuit, it was noticed that the inspiratory and expiratory tubes of the circuit were assembled opposite.	
No.27	**Wrong dosage of drug due to incomplete verbal instruction** – Cases of misdosage order occurring due to not clearly transmitting the units, dose or dilution conditions when verbal instruction were given –	6
	After preparing Pentagin 1/2A, the nurse received an order and prepared 10mL of 2mL Dormicum and 8mL normal saline. Next, the physician ordered “intravenous injection of Pentagin 1/2A” and the nurse read it back to the physician and then carried it out. Next, when the physician ordered “Dormicum 2mL,” the nurse could not hear the order, but injected Dormicum without reading back. When the physician asked “How many mL are you injecting? ” 8mL had already been injected. (There were five other similar cases)	
No.29	**Administration of 10 times proper dosage to pediatric patients** – Cases of overdose due to administration of 10 times proper dosage to pediatric patients –	2
	A physician incorrectly entered Tegretol 250mg/day in the ordering system, instead of 25mg/day. During prescription checking, the pharmacist recognized that the prescribed amount was excessive, but decided that the amount was to be used by a specialized physician, and prepared the prescription without inquiring with the physician. At the next visit, concentration of Tegretol (CBZ) in blood was high, but the physician did not notice that the volume was excessive, and prescribed the next prescription as 125mg, half the amount. Since the patient continued to experience drowsiness even after the prescription was changed, the physician reviewed the order, and noticed that 10 times the proper dosage of Tegretol was administered. (There was another similar case)	
No.30	**Administration of allergic drug to patient with previous known allergy history** – Cases of administration of contraindicated drug occurred due to drug allergy information not described in the predetermined site on the medical chart –	9
	The patient requested an analgesic for a headache. The nurse reported it to the physician on duty, informing the name of disease, etc., by confirming the medical chart. At the time, there was no description on the column of a contraindicated drug, but “AIA” (aspirin-induced asthma) was described outside of the frame of the medical chart and circled in red, but this was not transmitted. The physician on duty ordered Loxonin, a nonprescription drug, to be administered and the nurse gave the drug. (There were eight other similar cases)	

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No.[1)]	Title -Description-	Number of cases reported in 2010
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No.32	**Insufficient closure of the water trap cup** – Cases of temporary worsening of respiratory conditions in patients due to insufficient closure of the water trap cup of the ventilator circuit –	1

After disposing the standing water in the water trap of Servo 900E and re-connecting, the water trap cup was pulled downward and the connection was checked. One hour later, the nurse visited the room because of the alarm of ECG monitor rang. The patient showed signs of cyanosis and the minute ventilation volume of the ventilator showed "0." When the ventilator was replaced, the patient's condition improved. The water trap cup on the inspiratory side of the ventilator seemed to work at first, but when it was handled, the connection was insufficient.

No.33	**Extravascular leakage of gabexate mesilate** – Cases of using concentrations which exceeded the recommended dosage as listed on the "precautions regarding use and dose" in the package insert, during administration of gabaxate mesilate, leading to extravascular leakage –	2

The physician tried to insert a CV catheter but was unsuccessful. Instead, "Reminaron 1000mg+5% glucose solution 250mL" was administered by peripheral infusion to the left forearm which was used from the day before. The insertion area of this peripheral infusion was not sufficiently confirmed. During administration, there was no change in the insertion area. A new line could be secured on the right hand three hours later, so the line for Reminaron was re-connected. The next day, skin on the left forearm turned black and later became necrotized. The package insert contained the description that "when administering from a peripheral vessel, a drip IV at 50mL or more per 100mg Reminaron is desirable." (There was another similar case)

1) "No." indicates the provision number of the Medical Safety Information.

◆Other similar cases are to be included in the Annual Report 2010.

* 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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