Japan Council for Quality Health Care

Project to Collect Medical Near-Miss/ Adverse Event Information

Medical Safety Information

No.26, January 2009

Wrong application of reagent strips not designated for a specific blood glucose testing devices

A case where the blood glucose reading was lower than the actual value, due to an attachment of a test strip not designed with the blood glucose testing device, and a drug was administered based on the reading has been reported (information collection period, from January 1, 2006 to November 30, 2008; the information is partly included in "Medical Adverse Event Information to Be Shared" in the 13th Quarterly Report).

Attaching test strips which is not designed with the blood glucose testing devices may result in readings of erroneous blood glucose value.

Blood glucose testing device used in the reported event and the blood glucose test strips.

Blood glucose testing device	Designated reagent for blood glucose strips	Used undesignaged test strips
Precision Xceed	●Precision Xceed / Xtra G3 Blood Glucose test strips	LFS Quick Sensor
	●Precision Xceed / Xtra G3b Blood Glucose test strips "Smart Blue"	

◆ For other blood glucose testing devices, check the designated test strips in the package insert, etc.

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Case

When testing the blood glucose value, the nurse erroneously attached the strip of reagent LFS Quick Sensor which is not designed with the blood glucose testing device Precision Xceed. As a result, the blood glucose reading was 67mg/dL, so glucose solution was administered based on the reading. Blood glucose measurement followed twice, and glucose solution was administered again, however, the blood glucose reading did not improve. When the nurse wondered about it and checked, she noticed that an incorrect reagent strip was attached to the blood glucose testing device. When the blood glucose was tested after the designated test strip was attached, the blood glucose reading was 192mg/dL.
As the device could be operated and a reading was displayed even though a strip of LFS Quick Sensor was attached to Precision Xceed, the mistake was difficult to notice.

Preventive measures taken at the medical institution in which the event occurred.

- **Inform all staff that some devices can still be operated even though a reagent strip not designed with the device is attached, and will display incorrect readings.**
- **Display which test strip is designed with the specific blood glucose testing device to know the proper reagent.**

* 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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