Japan Council for Quality Health Care

Project to Collect Medical Near-Miss/ Adverse Event Information

Medical Safety Information

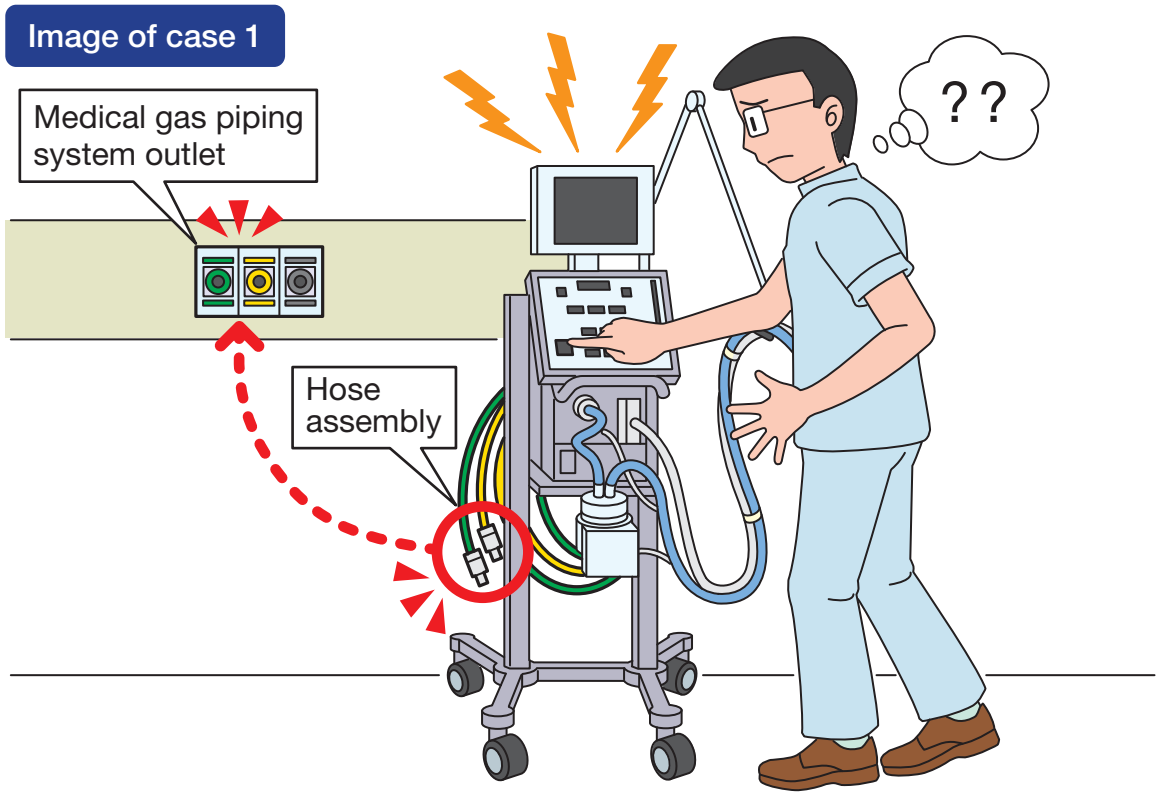
No.92, July 2014

Forgetting to Connect Ventilator Hoses

Four cases have been reported involving patients affected by being fitted with a ventilator whose hose assembly was not connected to the medical gas piping system outlet (information collection period: from January 1, 2011 to May 31, 2014; the information is partly included in “Individual Theme Review” in the 13th Quarterly Report).

Cases have been reported in which patients were affected by being fitted with a ventilator whose hose assembly was not connected to the medical gas piping system outlet.

Image of case 1



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Case 1

The patient was using a ventilator, apart from during short transfers. The ventilator being used by the patient was taken to the dialysis room so that the patient could use it there. After hemodialysis ended, 3L of oxygen was administered via a heat and moisture exchanger for spontaneous respiration while the patient was returned to his/her room, along with the ventilator, which was not fitted during transfer. As soon as the physician switched on the power supply to the ventilator, the alarm sounded, but the physician just pressed the mute button and fitted it to the patient as it was. Two minutes later, the patient's eyeballs rolled upwards, s/he developed limb seizures and cyanosis of the face, and s/he did not respond when called by name. When the nurse checked the ventilator, s/he noticed that the oxygen and air hose assemblies had not been connected to the outlets.

Case 2

The patient was using a ventilator following a tracheotomy. The patient was ventilated manually while being transferred to the fluoroscopy room for insertion of a PEG. After being brought into the fluoroscopy room, the patient was fitted with a portable ventilator. The patient's SpO_2 and level of consciousness subsequently declined suddenly and s/he developed convulsive seizures. When the nurse checked the portable ventilator, s/he noticed that the oxygen hose assembly had not been connected to the outlet.

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

- **Staff will connect the ventilator hose assembly to the medical gas piping system outlet and check that it is operating before fitting the ventilator to the patient.**
- **After the ventilator has been fitted, a physician or nurse check that it is operating in accordance with the settings and that the patient's chest is moving.**

Complementary comment by the Comprehensive Evaluation Panel

- **Provide education and training concerning the basic principles of ventilators, as well as checks and responses required when an alarm sounds.**
- **Use a checklist to check that the ventilator is working when fitting or re-fitting it.**

* 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 the "Comprehensive Evaluation Panel" to prevent the 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 cannot be guaranteed in the future.

* This information is intended neither to limit the discretion of healthcare providers nor to impose certain obligations or responsibilities on them.

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