Japan Council for Quality Health Care

Project to Collect Medical Near-Miss/ Adverse Event Information

Medical Safety Information

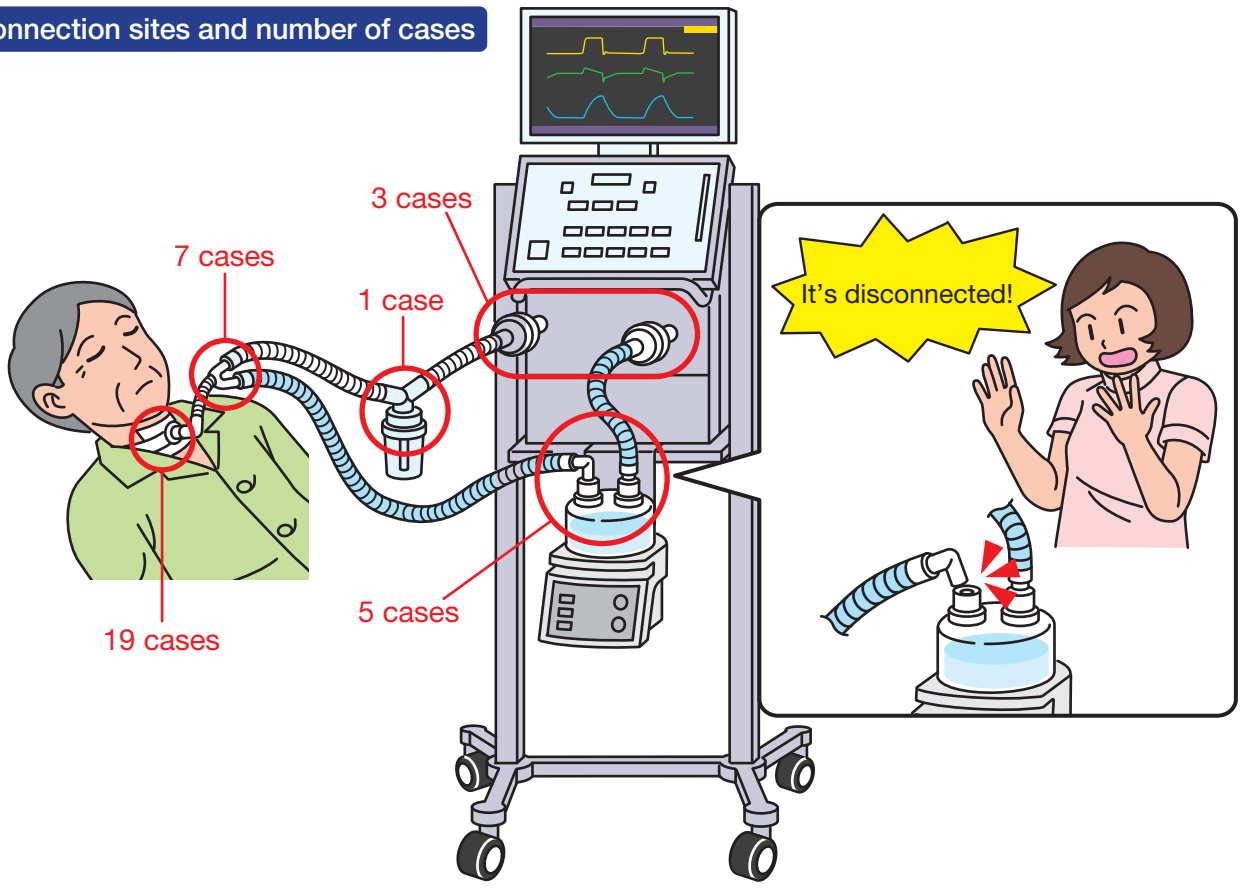
No.176, July 2021

Disconnection of Ventilator Circuit Tubing

Thirty-nine cases have been reported in which patients using a ventilator were affected after the circuit tubing became disconnected or loosened (information collection period: from January 1, 2017 to May 31, 2021). This information was compiled on the basis of the content featured in the Recurrence of Events and Occurrence of Similar Events section of the 64th Quarterly Report.

Cases have been reported in which patients were affected by the disconnection of ventilator circuit tubing.

Disconnection sites and number of cases



◆ In 4 cases, the site of the disconnection or loosened connection was unclear.

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Case 1

At the start of the shift, the nurse was supposed to check by hand that the ventilator circuit tubing connection had not loosened, but as they were hurrying to respond to a patient who had pressed the nurse call button, the nurse only checked the connection by eye. When the nurse subsequently went to the patient's room because the low SpO_2 alarm had sounded, the patient's face was pale, their SpO_2 was in the 50% range, and the ventilator circuit was disconnected from the tracheostomy tube.

Case 2

The patient's SpO_2 had fallen to the upper end of the 80% range and the low minute volume alarm had sounded, so the nurse performed tracheal suction. As the patient's SpO_2 did not rise, the lead nurse checked the circuit and found that the circuit was disconnected from the heated humidifier.

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

- **Check the patient's chest movement and the circuit connection if the ventilator's low minute volume, low ventilation, or low pressure alarms sound.**

The measure above is an example. Please consider initiatives suitable for your own facility.

* 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 the Project website for details.
https://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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