



Project to Collect Medical Near-Miss/
Adverse Event Information

Medical Safety Information

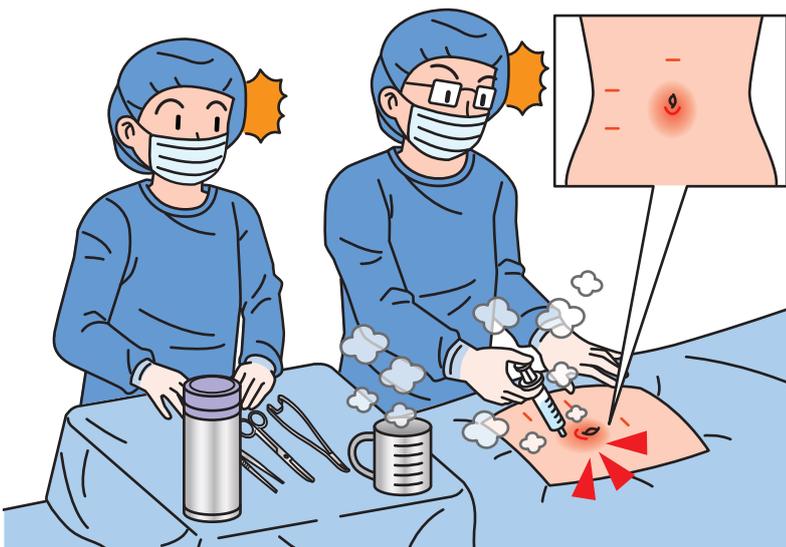
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Burn Caused by Hot Water Used to Prevent Laparoscopic Lens Fogging

Four cases have been reported in which a patient suffered burns while the incision was being closed during laparoscopic surgery, because subcutaneous tissue or skin was irrigated with the hot normal saline or distilled water used to prevent laparoscopic lens fogging (information collection period: from January 1, 2017 to May 31, 2023). This information was compiled on the basis of the content featured in the Details of Events section of the 55th Quarterly Report.

Cases have been reported in which a patient suffered burns during laparoscopic surgery, because hot water used to prevent laparoscopic lens fogging was used instead of warm normal saline to irrigate subcutaneous tissue or skin while the incision was being closed.

Image of case



Main Background Factors

- Due to having no experience of subcutaneous irrigation, the scrub nurse was rushing and passed the surgeon the hot water used to prevent fogging, rather than preparing fresh normal saline for irrigation.
- As some time had passed since the hot water used to prevent fogging had been prepared, the scrub nurse thought its temperature would have fallen.
- The scrub nurse placed their hand in the hot water used to prevent fogging, but as they were wearing two pairs of gloves, it did not feel hot.
- The scrub nurse stated that they would prepare warm normal saline for irrigation, but the surgeon did not wait for it to be prepared.

Burn Caused by Hot Water Used to Prevent Laparoscopic Lens Fogging

Case 1

The surgeon told the scrub nurse they intended to irrigate the subcutaneous tissue when closing the incision during laparoscopic surgery. The scrub nurse should have brought normal saline from the warmer so it could be used for irrigation, but they had no experience of subcutaneous irrigation and rushed to hand over the irrigation fluid as quickly as possible. As some time had passed since the hot sterile purified water used to prevent laparoscopic lens fogging had been prepared, the scrub nurse thought its temperature would have fallen and transferred it into a cup before handing it over. The surgeon could feel that it was hotter than usual, but used it for irrigation as it was, causing 3-4 cm of excoriation in the patient's umbilical region.

Case 2

The surgeon decided to irrigate the skin after closing the incision during laparoscopic surgery. As there was no warm normal saline in the sterilized area, the nurse transferred distilled water that had been being used to prevent laparoscopic lens fogging into a cup. The nurse placed their hand in the distilled water, but was wearing two pairs of gloves, so it did not feel hot and they handed it to the surgeon. When the surgeon irrigated the skin, the patient suffered a burn on their abdomen.

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

- Do not use hot water used to prevent laparoscopic lens fogging for irrigation of subcutaneous tissue or skin.

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.

