



Burn Caused by a Hot Towel

Sixteen cases have been reported in which a patient suffered burns when a hot towel was used for vasodilation before venipuncture or as a hot compress (information collection period: from January 1, 2018 to June 30, 2022). This information was compiled on the basis of the content featured in the Analysis Themes section of the 63rd Quarterly Report.

Cases have been reported in which patients suffered burns after the application of a hot towel.

Image of case



Main Background Factors Resulting in Burn

[Method of applying towel]

- Applied hot towel directly to skin
- Placed hot towel inside a plastic bag and applied the bag directly to skin

[Inadequate observation]

- Did not observe the area to which the towel was applied, due to past experience of the towel going cold after just 15 minutes
- Nurse was busy and therefore unable to observe the skin

[Lack of assessment]

- Did not consider the risk of burns, despite the patient having fragile skin

[Lack of procedure]

- There was no procedure for using a hot towel to dilate blood vessels

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Case 1

The nurse decided to use a hot towel to dilate the patient's blood vessels when changing the indwelling needle in the vein of a patient in whom it was difficult to secure a blood vessel. After removing the hot towel from the warmer, the nurse checked its temperature on the medial side of their own forearm and then applied it directly to the needle puncture site. The nurse did not observe the skin, as they subsequently left the patient to respond to another patient who had pressed the nurse call button. When the towel was removed 20 minutes later, the patient was found to have a burn.

Case 2

When taking a blood sample, the nurse decided to use a hot compress to dilate the patient's blood vessels. The nurse soaked a towel in water and heated it in the microwave. After placing the towel in a bag, the nurse applied it to the patient's right forearm and checked with the patient that it was not too hot. Although the area to which the towel had been applied was red 20 minutes later, the nurse thought it was due to the area having just been warmed and that there was no problem. When the nurse on the next shift observed the patient's skin 2 hours later, they noticed redness and swelling on the right forearm and the patient was diagnosed with a first-degree burn.

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

- Wrap hot towels in a cover or another towel, to ensure they do not come into direct contact with the patient's skin.
- Observe the warmed area regularly (such as every 5 minutes) when using a hot compress.

The measures above are examples. 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.

<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.

