



Japan Council for Quality Health Care

Project to Collect Medical Near-Miss/  
Adverse Event Information

Medical Safety  
Information

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## Burns When Using a Heat Pack

Ten cases have been reported in which patients suffered burns when using a heat pack (information collection period: from January 1, 2014 to February 28, 2018). This information was compiled on the basis of the content featured in the Details of Events section of the 50th Quarterly Report (p.85).

**Cases have been reported in which patients suffered burns when using a heat pack.**

Purpose of Use	Number of Cases	Background
Retaining warmth	6	<ul style="list-style-type: none"> <li>Applied continuously to the same site for about 1 hour</li> <li>Although moved away from the limb, it was in contact with the skin after the examination/treatment</li> </ul>
Vasodilation (insertion of an indwelling needle into a peripheral vein / taking a blood sample)	2	<ul style="list-style-type: none"> <li>Applied continuously to the site from which a blood sample was due to be taken for at least 30 minutes</li> <li>A cover was supposed to be used, but it was applied without the cover</li> </ul>
Alleviating vascular pain	1	<ul style="list-style-type: none"> <li>Applied continuously to the infusion insertion site for about 1 hour</li> <li>Fixed in place with tape</li> </ul>
Heat therapy during rehabilitation	1	<ul style="list-style-type: none"> <li>Was wrapped in a towel thinner than the thickness prescribed in the instruction manual</li> </ul>

\*The heat packs in question consist either of a heat-retaining gel wrapped in a film made from vinyl chloride, etc. or a moisture-absorbing heat-retaining material such as bentonite inside a cloth bag.

## Burns When Using a Heat Pack

### Case 1

The nurse heated the heat pack up in the microwave oven, placed it inside the dedicated pouch, and placed the pouch on the patient's arm as a hot compress. After a while, the patient felt the site become hot, but left the heat pack on, as they did not know whether it was all right to take it off. When the nurse removed the heat pack about an hour later, the area with which it had been in contact had turned red. A dermatologist examined the patient and diagnosed them with a low-temperature burn injury.

### Case 2

The nurse decided to warm up the patient's left forearm because it was difficult to collect a blood sample. The heat pack in question was supposed to be placed inside a cover, but the nurse used it to warm up the patient's left forearm without first placing it inside the cover and then took the first blood sample. The nurse left the heat pack in the same place even after collecting the blood sample and then took the second blood sample about 30 minutes later. The nurse subsequently noticed redness and blistering on the patient's left forearm. A dermatologist examined the patient and diagnosed them with a low-temperature burn injury.

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

- Staff will read the heat pack instruction manual and tailor their use of heat packs to the patient's condition.
- When using heat packs, staff will keep the site to which they are applied under observation.

\* 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.

