

《報告》

**Long-term Observation of Thermal Conditions in the Catheterization Room:
toward Effective Management of Body Temperature in Patients
with Coronary Artery Disease Undergoing Cardiac Catheterization**

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Abstract

[Background] Cardiac catheterization is usually performed for diagnostic or therapeutic purposes in patients with coronary artery disease. Because the rooms used for this procedure are typically cool and the patients' torsos uncovered, they often shiver. Shivering is undesirable during cardiac catheterization because it increases oxygen consumption and therefore myocardial stress. Accordingly, we examined the thermal conditions of a catheterization laboratory. **[Methods]** We used high-precision data loggers and sensors placed near the examining table to measure the temperature and humidity of a catheterization room once a minute over 3 months from September to November, 2011. We also compared our data with corresponding data obtained from the Japan Meteorological Agency for the outside air. **[Results]** We found that the mean room temperature in the cardiac catheterization room was 25.1°C, 25.8°C and 26.2°C, and room humidity 57.3%, 42.8% and 34.4% for September, October and November, respectively, the means over the whole 3 months being 25.7°C and 44.7%. **[Conclusions]** These values are likely to induce hypothermia and shivering because they are below the thermoneutral range for naked humans. We concluded that during cardiac catheterization patients should be kept warm enough to maintain body temperature and prevent shivering.

Keywords: cardiac catheterization room, thermal environment, body temperature regulation, hypothermia