Hypothermia Better Managed With Underbody Warming Blankets Than Overbody

Chicago—Underbody warming blankets ultimately may prove to be a better choice than their overbody counterparts, with respect to both treating and preventing hypothermia, according to a recent study.

"A few years have passed since underbody-type blankets were introduced to the market," began Hiroshi Sumida, MD, a staff anesthesiologist at the Tohoku University School of Medicine, in Sendai, Japan. "Many clinicians think these underbody blankets are useful, but there are only a few reports evaluating their efficacy. So we wanted to determine how well they might work."

The efficiency of perioperative forced-air warming is largely dependent on the surface area of the skin that is directly adjacent to the blanket. Dr. Sumida explained, who added that this is why conventional forced-air warming with a single blanket does not adequately warm the entire body, except during cranial or ENT (ear, nose and throat) surgery. Underbody blankets, on the other hand, warm efficiently because they heat a larger surface area.

Warm, But How Effective?

To help determine the relative efficacy of the two systems, Dr. Sumida and his colleagues studied the records of 8,032 patients who underwent surgery at the institution between April 2014 and November 2015, 5,413 of whom had their body temperature measured (at the bladder) during surgery. Propensity score matching was used to reduce bias due to lack of randomization. The researchers compared changes in body temperature between groups, as well as the incidence of hypothermia (body temperature <36.0°C at the end of surgery).

"We incorporated a number of variables into the propensity score matching, including age, gender, height, weight, ASA [American Society of Anesthesiologists] physical status, type of surgery, type of anesthesia and the type of warming blanket used," Dr. Sumida explained.

As reported at the ASA 2016 annual meeting (abstract A211), a total of 438 propensity score-matched pairs were generated; there were no differences between groups with respect to various patient characteristics. It was found that among patients in the underbody group, body temperature at the end of surgery