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Intraoperative hypothermia in laparoscopic surgery and new-concept air conditioning system of operation room

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Abstract

It is important to control the body temperature of the patients adequately in operation room (OR). In this presentation the studies about the hypothermia in laparoscopic surgery (lap-S) and the new method to avoid intraoperative hypothermia are described.
In the first part it is discussed the characteristics of the patients tending to have hypothermia in surgical therapy. The results of my study showed that the patients undergoing lap-S tended to have hypothermia rather than the patients undergoing open surgery. The colon cancer patients undergoing lap-S tended to have hypothermia rather than the gastric cancer patients. The female patients and the low BMI patients in male patients tended to have hypothermia. These results were useful for exploring the mechanisms of hypothermia in lap-S. But, there is another important reason of intraoperative hypothermia. It is the discrepancy between the most comfortable temperature of the OR for the patients and that for surgeons.
In the second part it is described the ORs which achieve both patients' normothermia and surgeons' comfort. The ORs with a new-concept air conditioning system was constructed in Kagawa University Hospital after the experimental studies. The new system has two parts. One controls the temperature of the central area over the operation table. The air from this part falls on the patients. The other part is the lateral area beside the operating table; the air from this part falls on the surgeons. The frequencies of the hypothermic state in the patients undergoing lap-S in the old ORs were compared with the frequencies in the new ORs. The frequencies of the hypothermic state in the new ORs decreased typically in comparison with the frequencies of the old ORs. Thus, the usefulness of the new air conditioning system for achieving patients' normothermia was verified.

Biography

Hisashi Usuki has graduated Okayama University Medical School, Japan. He has completed his PhD at the age of 33 years from Okayama University. He is the professor of Kagawa University Hospital and the director of surgical center of the hospital. He is a surgeon and his profession are digestive surgery and surgical oncology. He is also a director of Japanese Association of Thermology. Then, he started to study about the intraoperative hypothermia after inauguration of the director of the surgical center.

Publications

1. Spontaneous regression of advanced transverse colon cancer with remaining lymph node metastasis
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