The data of 124 patients treated with RC for MIBC in our department from 2003 to 2016 were retrospectively collected. RCs were an independent predictor for prognosis in several cancers. The objective of this study was to evaluate intraoperative hypothermia as a predictor of complication and prognosis in patients with muscle-invasive bladder cancer (MIBC) treated with radical cystectomy (RC).

Intraoperative hypothermia has been reported to be associated with complications in several kinds of cancer surgeries. Moreover, lymphopenia due to hypothermia may be related to the suppression of the immune system for cancer, and could be a potential predictor for OS and DFS in patients with MIBC. Therefore, intraoperative hypothermia may improve prognosis.

Patients, materials, and methods

The data of 124 patients treated with RC for MIBC in our department from 2003 to 2016 were retrospectively collected. RCs were performed in an open fashion with minimal standard template pelvic lymph node dissection. Tumor stages were classified according to the 2009 TNM-UICC stage classification system. Esophageal temperatures were measured by the transesophageal approach at every 5 minutes intervals, as intraoperative deep body temperature. A Warm–air unit (Bair Hugger) was used as the warming device. Intraoperative hypothermia was defined as the lowest intraoperative deep body temperature below 96.8°C (36.0°C) in accordance with the guideline of American Society of Anesthesiologist.

The patients were divided into two separate groups according to their lowest intraoperative body temperature, i.e., the hypothermia group (< 96.8°C) and the normothermia group (≥ 96.8°C). Preoperative and intraoperative variables were compared among the two groups, and factors associated with complications, recurrences and survivals were statistically analyzed.

Results

The data presented in this study suggest the usefulness of intraoperative hypothermia as a predictive factor for OS and DFS in patients with MIBC treated with RC. These data may be helpful for urologists, because careful management or close follow-up after RC for patients who presented intraoperative hypothermia may improve prognosis.

Conclusion

Perioperative Hypothermia is a Prognostic Factor of Cystectomy Especially for Stage II Muscle-Invasive Bladder Cancer