NERVE PRESERVING SURGERY FOR CHILDREN WITH PELVIC TUMORS

Eiso Hiyama, Takashi Yokoyama, Hiroaki Yamaoka, Taijiro Sueda.

Department of General Medicine, First Department of Surgery, Hiroshima University. School of Medicine

Purpose. Urinary dysfunction due to the injury of pelvic nerves is sometimes complicated after pelvic surgery, particularly resection of large pelvic tumors. Recently, to avoid such dysfunctions, we have tried to preserve hypogastric nerves in the cases with pelvic tumors.

Methods. Between 1997 and 2001, we treated 7 children with pelvic tumors including 3 neuroblastomas, 2 teratomas, and 2 rhabdomyosarcoma. We firstly carried out laparotomy to find out bilateral hypogastric nerves at iliac arteries and then resected tumors with/without sacral approach. Postoperative urinary dysfunction was evaluated by the clinical symptoms and bladder function tests.

Results. To reduce the tumor size, preoperative chemotherapy was needed in 4 cases with large pelvic tumors including the case with urinary dysfunction and lower limb paralysis due to a large neuroblastoma. We could only preserved unilateral hypogastric nerve in this neuroblastoma case and bilateral nerves could be preserved in the remaining 6 cases. None had clinical symptoms of urinary voiding or abnormal bladder functions. One case who had local recurrence of tumor underwent the reoperation to remove the recurrent tumor and she are alive with disease free.

Conclusions. Surgical approaches preserving the pelvic nerves especially hypogastric nerve should be attempted for pelvic tumors. In cases with large pelvic tumors, preoperative chemotherapy should be performed to reduce the size of tumors. At surgery, laparotomy is necessary to detect and preserve these nerves. A better understanding of the neuroanatomy of pelvic nerves and preservation of these nerves may help the children with pelvic tumors to minimize urologic and rectal complications.