

ONCODAILY MEDICAL JOURNAL

abstract

Decompressive Laparotomy in Children With Intra-Abdominal Hypertension Syndrome: One Center Experience

Eshita Reza Khan, Dmitry Akhaladze, Anatoly Krivonosov, Nikolay Merkulov, Ivan Tverdov, Natalya Uskova

DOI: 10.69690/ODMJ-018-0425-1394



SIOP Asia, 2025, Saudi Arabia

abstract

Decompressive Laparotomy in Children With Intra-Abdominal Hypertension Syndrome: One Center Experience

Authors: Eshita Reza Khan, Dmitry Akhaladze, Anatoly Krivonosov, Nikolay Merkulov, Ivan Tverdov, Natalya Uskova

Affiliation: Dmitry Rogachev National Medical Research Center Of Pediatric Hematology, Oncology and Immunology

DOI: [10.69690/ODMJ-018-0425-1394](https://doi.org/10.69690/ODMJ-018-0425-1394)

Introduction: The syndrome of intraabdominal hypertension in patients with cancer is a pathological increase of intra-abdominal pressure due to a large volume of tumor mass. It comes to abdominal compartment syndrome (ACS) and multiple organ dysfunction. Surgical decompression is the only effective method of treating ACS.

Methodology: In our center over 9 years, 17 decompressive laparotomies were performed: 13 – neuroblastoma 4S, 2 – hepatoblastoma, 1 – malignant rhabdoid tumor of the liver, 1 – nephroblastoma. The median age was 5.8 months. All patients underwent measurement of intra-abdominal pressure and abdominal circumference, assessment of respiratory function and cardiovascular systems, renal function, and coagulogram.

The determining factor for decompressive laparotomy was a combination of intra-abdominal hypertension and dysfunction of one of the body's systems at least (respiratory, cardiovascular, urinary). Intraoperatively monitoring was performed to assess the dynamics of the patient's condition (respiratory volume, cardiovascular activity). There were no intraoperative complications.

Results: There were 5 complications in the postoperative period: bleeding from the postoperative wound – 1; suppuration of the wound – 1; laparotomy failure – 2; necrosis of the soft tissues – 1. 2 patients had multiple organ dysfunction due to the progression of abdominal compartment syndrome. In 7 cases meshes were removed and reconstructive plastic of the anterior abdominal wall was performed: 6 – at the end of treatment of cancer or stabilization of the disease, 1 – on the 54th day of the postoperative period due to suppuration in the area of the postoperative scar. Laparotomy was not removed in 10 patients, 5 of them died due to the progression (23.5%). 12 children (45%) completed program therapy.

Conclusion: In all cases, when ACS appears, decompressive laparotomy makes it possible to eliminate the phenomena of multiple organ dysfunction in patients with malignant tumors of the abdominal cavity and then continue conservative therapy of the main disease.