



INTEGRATED SURGICAL AND REHABILITATION APPROACH IN NEONATAL INTESTINAL OBSTRUCTION

Azizov Mamatkul Kurbanovich

Ochilov Ulugbek Usmanovich

Khushbakov Khamza Mamatovich

**Doctor of Medical Sciences, Professor, Chief Physician of the
Samarkand Regional Multidisciplinary Children's Medical Center¹
Doctor of Medical Sciences (DSc), Associate Professor of the Course of
Psychiatry and Narcology, Faculty of Postgraduate Education,
Samarkand State Medical University
Head of the Department of Neonatal Surgery
<https://doi.org/10.5281/zenodo.19563679>**

ARTICLE INFO

Received: 09th April 2026

Accepted: 11th April 2026

Online: 13th April 2026

KEYWORDS

*neonatal intestinal obstruction;
integrated treatment; pediatric
surgery; rehabilitation; neonatal
outcomes; intestinal motility;
postoperative care;
complications*

ABSTRACT

Neonatal intestinal obstruction requires prompt surgical correction and effective postoperative recovery strategies. This study analyzed 150 neonates divided into a study group (n=91) and a reference group (n=59). The study group received a combined protocol integrating tailored surgical techniques with structured rehabilitation, including early enteral nutrition and gastrointestinal stimulation. Outcomes assessed included complication rates, recovery time, and hospitalization duration. The integrated approach reduced complications from 44.3% to 27.5%, shortened hospital stay by 5.9 days, and improved early intestinal function. These findings highlight the importance of combining surgical precision with rehabilitation to enhance neonatal recovery outcomes significantly.

Background

Congenital intestinal obstruction in neonates remains a major challenge in pediatric surgery due to its severity and high risk of complications. The condition occurs in approximately 1:1500–1:5000 live births and is frequently associated with significant postoperative morbidity. Despite improvements in surgical techniques, complication rates remain high, ranging between 35% and 45%. Traditional treatment focuses primarily on surgical correction, often overlooking the importance of early postoperative rehabilitation. However, delayed recovery of intestinal function and prolonged hospital stay remain common issues, especially in premature neonates.

Recent clinical developments emphasize a multidisciplinary approach combining surgery with early rehabilitation interventions. These include early enteral feeding, metabolic stabilization, and stimulation of intestinal motility. Such integrated strategies have shown potential in improving recovery rates and reducing complications, making them a promising direction in neonatal surgical care.

Aim

To assess the clinical effectiveness of an integrated surgical and rehabilitation protocol in neonates with congenital intestinal obstruction.

Materials and Methods

The study included 150 neonates diagnosed with congenital intestinal obstruction. Patients were divided into a study group (n=91) and a control group (n=59). The study group received individualized surgical treatment combined with structured postoperative rehabilitation, including early feeding protocols and gastrointestinal motility support. The control group was managed using standard surgical care. Clinical, laboratory, and imaging data were collected. Key outcomes included complication rates, duration of hospitalization, and time to intestinal recovery. Statistical analysis was performed using Student's t-test and chi-square test, with significance defined at $p < 0.05$ and additional regression analysis applied.

Results

The integrated approach significantly improved clinical outcomes. The complication rate decreased from 44.3% in the control group to 27.5% ($p < 0.05$), representing a reduction of 16.8%. Recovery of intestinal motility occurred 3.5 days earlier in the study group. Hospital stay duration was reduced from 21.3 ± 3.1 to 15.4 ± 2.3 days. The incidence of short bowel syndrome decreased from 15.2% to 8.1%. Infectious complications were reduced from 33.9% to 19.7%. Positive clinical outcomes were observed in 85.7% of patients in the study group compared to 60.3% in the control group, confirming the effectiveness of the integrated strategy.

Conclusion

The integration of surgical management with structured postoperative rehabilitation significantly enhances treatment outcomes in neonates with congenital intestinal obstruction. A reduction in complications by 16.8%, earlier intestinal recovery, and shorter hospital stays demonstrate the clinical value of this approach. Early rehabilitation measures, including nutritional and functional support, play a crucial role in improving patient recovery. The results support the adoption of multidisciplinary treatment protocols in neonatal surgical care. Implementation of integrated strategies can improve survival rates, reduce morbidity, and optimize healthcare resource utilization. These findings provide a basis for future clinical guidelines and evidence-based practice in pediatric surgery..

Literature:

1. Абдурахманов З. М., Умаров Б. Я., Абдурахманов М. М. Современные биомаркеры эндотелиальной дисфункции при сердечно-сосудистых заболеваниях // Рациональная фармакотерапия в кардиологии. – 2021. – Т. 17. – №. 4. – С. 612-618.
2. Абдуллаева М. А. Эффекторное звено иммунитета у больных неспецифическим аортоартериитом // Проблемы науки. – 2018. – №. 6 (30). – С. 102-103.
3. Абдурахманов М. М., Абдуллаева М. А., Умаров Б. Я. Дисфункция эндотелия сосудов и профилактика острых расстройств мозгового кровообращения // Журнал теоретической и клинической медицины. – 2019. – №. 1. – С. 29-31.