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# SURGICAL TACTICS FOR GASTROSCHISIS IN CHILDREN

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.**Abstract**:gastroschisis is a congenital defect of the abdominal wall characterized by protrusion of the abdominal contents through a defect in the abdominal wall, usually located to the right of the navel. This condition poses unique challenges to surgical treatment due to the risk of bowel injury, infection, and other complications. The timing and technique of surgical intervention are very important to optimize results, requiring a customized approach based on the individual situation, focusing on minimizing morbidity and optimizing long-term results. Research into innovative surgical techniques and postoperative care strategies continues to improve the prognosis for children with this disease.
**Key words:**gastroschisis, pediatric surgery, surgical technique, primary closure, staged repair, neonatal care.

Children's diseases are a group of diseases that occur mainly in children or have a specific course in childhood. According to the characteristics of the child's development, the period of growth in the mother's womb, the period of infancy, the period after the birth of a child (4 weeks), the period of nursing (up to one year), the period of old age (up to 2 years), the period of preschool age (up to 7 years), primary school age (up to 12 years) and adolescence or adulthood (up to 18 years) is distinguished. The period of growth in the mother's womb plays an important role in the formation of the child; Harmful factors during pregnancy (diseases, intoxications, lack of living and nutritional conditions, drug effects) affect not only the mother, but also the growth and development of the fetus in the womb.

During this period, more injuries during childbirth (asphyxia, injuries, paralysis, staphylococcal infections) are observed. Babies are innately resistant to some infectious diseases, but they (especially premature children) are quickly affected by purulent microbes, primarily staphylococci, causing purulent inflammation of the umbilical wound, cold sores, and even severe disease such as infant sepsis. During this period, zotiljam is also a dangerous disease. It is very difficult for a child to adapt to a change in food during breastfeeding, and when he is fed incorrectly, stomach disorders (diarrhea, intestinal infections, etc.) and metabolic disorders are observed.

During this period, diseases of the respiratory and digestive organs are severe; rickets, diathesis, and spasmophilia often occur as a result of improper feeding of the child, insufficient enjoyment of fresh air and sunlight. Toddlers and preschoolers can get whooping cough, measles, diphtheria, rubella, and others while playing with their peers. In addition, the strength of the mother's immunity is lost. Therefore, during this period, children are vaccinated (vaccination) and immunity is created. Infectious diseases are more common in school-aged children. When a nursing child is sick with whooping cough and measles, the lungs are often

inflamed, but most of these diseases pass without complications in school-age children (the lungs are not inflamed). Angina, heart and kidney diseases, as well as allergic diseases are more common in children of primary school age. In older children and during adolescence (puberty), serious changes occur in the activity of the cardiovascular, nervous and endocrine systems (endocrine glands).

Students who don't enjoy enough fresh air, don't do sports, don't follow the daily schedule, these systems are more sick. Therefore, different forms of children's diseases depend on the body's resistance, resistance to infectious diseases, and the child's age. Every disease, no matter what it is (infectious or non-infectious), is milder in a physically fit, healthy child, and more severe in a thin, emaciated child. The disease caused by the same microbe has different symptoms at different ages of the child. In the prevention of children's diseases, the specific characteristics of the child's organism are taken into account. During breastfeeding, mother's milk is the most suitable food, and in case of need for additional feeding of the child, it is necessary to consult a doctor (pediatrician). Proper organization of feeding babies through milk kitchens is of great importance. The sooner children's diseases are detected and treated in time, the more complications will not remain. For this, it is necessary for adults and parents to know the methods of prevention of children's diseases and the first signs, and to immediately consult a doctor when they notice any symptoms of the disease in a child. Gastroschisis is an abdominal defect. The baby is born with the intestines (bowel) outside the body through an opening near the belly button. This defect happens very early in pregnancy. It can range from a small to a large defect. It sometimes contains other organs like the stomach or liver. Gastroschisis can usually be seen before the baby is born by ultrasound. The intestines will be seen outside the abdominal cavity. The intestines are exposed to amniotic fluid during the pregnancy. They can become damaged, irritated, or swollen. This can prevent them from working normally once they are placed back inside the abdomen. The intestines can also shorten, twist, or swell, leading to intestinal blockage, which can cause feeding problems. We will closely monitor for any issues and care for your baby should any of these problems occur. You and your baby will be watched closely throughout your pregnancy. Pregnancies with gastroschisis are at higher risk for: Poor fetal growth, Decreased amniotic fluid volume, Preterm delivery, Stillbirth.

You can expect to be watched closely with diagnostic tests and ultrasounds. Most women are able to deliver babies with gastroschisis vaginally. If there is a medical concern or if your baby is having difficulty before birth a cesarean delivery may be needed. Sometimes gastroschisis can fixed completely right away. This is called a primary gastroschisis repair. More commonly, the repair is done in steps called a staged repair. Sometimes the intestines need to be placed in a plastic pouch, called a “silo,” to allow the intestines to be slowly pushed back down into your child’s abdomen over a few days. The abdomen is then closed in a surgery in the operating room. After birth, a surgeon will decide the best method for your baby depending on the size and condition of the exposed intestine. Your baby will not be able to eat for a while after surgery. We strongly encourage the use of breast milk because it has many benefits to infants with special medical needs. Breast milk supports growth and helps to heal the intestine. We will use your colostrum (the first breast milk you make) to drop in your baby’s cheek to strengthen their immune system and as a sweet taste while we wait to start feeding. Once your baby stools after surgery and the NG tube or OG tube has been removed, we will be able to feed your baby small amounts of milk. Feeding can be a hard part of recovery because the intestines were swollen and inflamed at birth. As your baby begins to feed better we will slowly increase the amount of milk or formula. When your baby is eating enough to gain weight, the IV will be removed.It is important for you to pump breast milk immediately after delivery and continue to pump at least 8 times per day using a hospital grade pump. If you do not pump regularly or effectively, your body will slow down or stop making milk all together. It is important for you to try to get to a full milk supply (more than 24 ounces per day) by day 14. Our nurses and lactation consultants can help you get started pumping and answer any questions you may have. The NICU has breast pumps available to you. We will store your breast milk while your baby is not eating.

The goals of surgical treatment of GS are safe reduction of the herniated viscera (with immediate and/or delayed surgical treatment of bowel consequences of complex GS), closure of the defect and avoidance of abdominal compartment syndrome. Defect closure can be performed early (i.e. within 6 h) with sutures or without (i.e. “sutureless” closure); or in a delayed manner after gradual visceral reduction using a prosthetic silo. The optimal technique for GS defect closure remains a knowledge gapThis study

highlights the lateness of presentation and intervention with only 20.5% presenting within 6 h of birth and 11.1% being treated within that time frame. These challenges, in addition to lack of parenteral nutrition, functional neonatal intensive care units and pediatric ventilators have been reported by other researchers in our region.We were constrained by the lack of standard silos to use amniotic membrane, latex gloves, drip bags, and urine bags at various times to improvise silos. We have also tried to adopt the innovative technique of sutureless gastroschisis closure. None of these gave us any result as encouraging as we have seen with extended right hemicolectomy. Though gastroschisis had not been a common indication for colonic resection in our region, this trend may change with the findings of this study.We noted in the course of this study, the technical difficulty of performing anastomosis in the edematous matted loops of bowel in gastroschisis.

This indeed accounted for some of the mortalities in the ERH group. Contrary to our initial concerns, aside from the initial frequent stooling, there was no evidence of short bowel syndrome, poor weight gain, or impaired growth during the period of follow up in the patients who were treated with ERH.An improvement from a survival rate of 6.3% in patients managed with our improvised silo to 66.7% in patients managed with extended right hemicolectomy and immediate fascial closure is remarkable. Though this does not measure up with the results reported by authors in the high-income countries, we consider it a significant advancement in our management of gastroschisis.We recognize the limitations of this study because of the small volume of patients, and the fact that the improvised silos are not standardized. A larger-scale multicenter study is required to properly test the option of extended right hemicolectomy and immediate fascial closure versus the use of surgical silo in the treatment of gastroschisis. However, our preliminary results in this study suggest that this technique has a potential to turn around the tide in the outcome of the treatment of gastroschisis in our region.

Upon diagnosis, a thorough evaluation of the infant’s condition, including any associated anomalies and the condition of the bowel, is essential. Before surgery, stabilization of the infant is crucial. This may include managing fluid and electrolyte imbalances, maintaining temperature, and preparing for potential respiratory support.The primary surgical intervention typically occurs within the first few hours after birth. The exposed bowel is assessed for viability, and any necrotic segments are removed.The bowel is carefully reduced back into the abdominal cavity. In cases of significant bowel swelling, a staged reduction using a silos or mesh may be employed to gradually accommodate the bowel.The abdominal wall defect is closed either primarily if possible or with the use of prosthetic materials in more complex cases. Close monitoring for complications such as infection, bowel obstruction, or ileus is essential. Early enteral feeding may be initiated to promote bowel function. Children who undergo corrective surgery for gastroschisis require ongoing follow-up to monitor growth, nutritional status, and any bowel-related complications. The surgical management of gastroschisis requires a tailored approach based on the individual patient's condition. Both primary closure and staged repair have their indications, advantages, and challenges. Early intervention, meticulous surgical technique, and comprehensive postoperative care are essential to minimize complications and enhance long-term outcomes for children with gastroschisis. Ongoing research into innovative surgical methods and improved care protocols continues to refine treatment strategies for this complex condition.

**References:**


1. Lap C.C., Bolhuis S.W., van Braeckel K.N. et al.: Functional outcome at schoolage of children born with gastroschisis, Early Hum Dev., 2017; 106–107: 47–52.
2. Ross A.R., Eaton S., Zani A. et al.: The role of preformed silos in the management of infants with gastroschisis: a systematic review and meta-analysis. Pediatr Surg Int., 2015; 31: 473–483.
3. Sanseverino MT, Gomes KW, Magalhães JA. Associated factors for perinatal mortality in gastroschisis. Rev Bras GinecolObstet. 2013;35:549–53.
4. https://aops.springeropen.com/articles/10.1186/s43159-019-0012-x
5. https://www.sciencedirect.com/science/article/abs/pii/S1055858618300702
6. https://health.choc.org/handout/gastroschisis/
7. https://uz.m.wikipedia.org/wiki/Bolalar_kasalliklari
8. Yusupov Sh.A, Shamsiev A.M, Atakulov Zh.O, Jalolov D.A. Assessment of

9. the intensity of endogenous intoxication syndrome in children with widespread
10. appendiceal peritonitis // Journal “Medical Almanac” - 2019. No. 5-6(61). – pp. 57-61.
11. Shamsiev A.M., Yusupov Sh.A., Sharipov R.Kh. The influence of ozone therapy on indicators of lipid peroxidation in children with common forms of appendiceal peritonitis // Journal “Annals of Surgery” - 2001. - T. 5. - P. 77.
12. Yusupov Sh.A, Shamsiev Zh.A, Suvankulov U.T, Daycare E.S. Surgical tactics for obstructive calculous pyelonephritis in children Journal “Saratov Medical Scientific Journal” - 2007. - T. 3, No. 2. – pp. 79-80.
13. Yusupov Sh.A, Mardyeva G.M., Bakhritdinov B.R. Features of radiological semiotics for pneumonia in young children // Journal “Current nutrition of pediatrics, obstetrics and gynecology” – 2017. No. 2. – pp. 21-24.
14. Shamsiev A.M., Yusupov Sh.A., Yuldashev B.A., Mukhamadieva L.A. The state of the immune status in children with chronic bronchitis // Journal “Pediatric Bulletin of the Southern Urals” - 2017. No. 1. – pp. 84-89.
15. Shamsiev A.M., Yusupov Sh.A., Makhmudov Z.M. Surgical treatment of children with acute hematogenous osteomyelitis of the bones forming the hip joint // Journal “Russian Bulletin of Pediatric Surgery, Anesthesiology and Reanimatology” - 2014. - Vol. 4, No. 3. – P.86-89.
16. Yusupov Sh.A, Kurbaniyazov Z.B, Zainiev A.F. Thyroid nodules. state of the problem (literature review) // Source “Bulletin of Scientific Research” – 2018. No. 1. – pp. 10-15.
17. Nugmanovna, M. A. (2024). Ethical Problems Of New Reproductive Technologies. Miasto Przyszłości, 9-12.
18. Shamsiev A.M., Saidov M.S., Aipov R.R., Atakulov D.O., Yusupov Sh.A. Surgical correction of fecal incontinence with fistulas in the reproductive system in girls // Journal “Russian Bulletin of Pediatric Surgery, Anesthesiology and Reanimatology” - 2014. - T. 4, No. 2. – P.25-29.
19. Shamsiddinova, M., & Maxmudova, A. (2024). TIBBIYOTDA DEONTOLOGIYA VA BIOETIKANING DOLZARB MUAMMOLARI. TAMADDUN NURI JURNALI, 8(59), 93-97.
20. Shamsiev A.M., Saidov M.S., Atakulov D.O., Yusupov Sh.A., Shamsiev Z.A., Suvankulov U.T. Surgical treatment of anorectal defects in children. Journal “Bulletin of Surgery named after II Grekov” - 2011. - T. 170, No. 2. – pp. 40-43.
21. O’tayev, S. T., & Mahmudova, A. N. (2023). O’zbekiston Respublikasining sog’liqni saqlash tizimida hozirgi kunda neyroxirurgiya yutuqlari. Science and Education, 4(2), 190-194.
22. Nugmanovna, M. A. (2022). Bioethics as a form of protection of individuality and personalized medicine. Thematics Journal of Social Sciences, 8(4).
23. Nugmanovna, M. A., & Gennadievna, A. O. (2022). PRINCIPLES OF FORMATION OF ENVIRONMENTALLY SIGNIFICANT VALUES AMONG MEDICAL UNIVERSITY STUDENTS. Thematics Journal of Social Sciences, 8(3).
24. Nugmanovna, M. A., & Kamariddinovna, K. M. (2022). What A Doctor Should Know To Work Safely And Effectively: International Norms And Rules. Thematics Journal of Social Sciences, 8(3).
25. Nugmanovna, M. A., & Kamariddinovna, K. A. (2021, January). Modern biotechnical problems of medicine and their solutions. In Archive of Conferences (Vol. 13, No. 1, pp. 169-173).
26. NUGMANOVNA, O. F. O. M. A. (2023). ABORTION AS AN ETHICAL PROBLEM. Journal of Modern Educational Achievements, 9(9), 31-39.
27. Makhmudova, A. N. (2024). Bioethics as a new direction in the moral and ethical discourse of modern society. Science and Education, 5(4), 268-271.
28. Бердиярова, Ш. Ш., Юсупов, Ш. А., & Назарова, Г. Ш. (2022). Клинико-лабораторные особенности хронического гематогенного остеомиелита. Central Asian Research Journal for Interdisciplinary Studies (CARJIS), 2(5), 116-125.
29. Юсупов, Ш. А., & Хакимова, Л. Р. (2023). ПРОГНОСТИЧЕСКАЯ ВОЗМОЖНОСТЬ ИММУНОГЕНЕТИЧЕСКИХ ИССЛЕДОВАНИЙ В ИЗУЧЕНИИ ЗАБОЛЕВАЕМОСТИ МОЧЕКАМЕННОЙ БОЛЕЗНЬЮ У ДЕТЕЙ. Вестник Авиценны, 25(3), 346-355.
30. Юсупов, Ш. А. (2009). Диагностика внутрибрюшных абсцессов в раннем послеоперационном периоде при аппендикулярных перитонитах у детей. Вестник Уральской медицинской

академической науки, (3), 36-39.
31. Юсупов, Ш. А., Атакулов, Ж. О., Шукурова, Г. О., Аббасов, Х. Х., & Рахматов, Б. Н. (2023). Периоперационное ведение детей с распространенными формами аппендикулярного перитонита. Science and Education, 4(9), 118-127.
32. Юсупов, Ш. А., Мухаммадиев, А. А., & Джалолов, Д. А. (2020). КЛИНИКО-ДИАГНОСТИЧЕСКИЕ ОСОБЕННОСТИ ДИВЕРТИКУЛ МЕККЕЛЯ У ДЕТЕЙ. In АКТУАЛЬНЫЕ ВОПРОСЫ СОВРЕМЕННОЙ НАУКИ И ОБРАЗОВАНИЯ (pp. 169-172).