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WAYS TO OPTIMISE PATIENT OUTCOMES AND IMPROVE THE QUALITY OF MEDICAL CARE IN SURGICALLY CORRECTABLE CONGENITAL MALFORMATIONS IN SAMARKAND

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Abstract:

Currently, most congenital malformations are successfully corrected in the neonatal period. The success of surgical treatment largely depends on early diagnosis, adequate preoperative preparation and timely transfer of the child to a surgical hospital. With timely and adequate care at all stages, up to 90% of newborns have a favourable prognosis. This article presents data ranking organizational and diagnostic errors in the provision of surgical care to newborns with congenital malformations of the gastrointestinal tract.

Keywords: congenital malformations, gastrointestinal tract, newborns, medical care, surgical care

1.INTRODUCTION.

The quality of health of newborns and infants is of particular importance in modern conditions characterised by a significant decline in the birth rate. The first year of life, especially the neonatal period, is the most important, critical period of human ontogenesis. The complexity of this ontogenetic stage is determined by the intensity of the processes of morphological and functional restructuring that accompanies the adaptation of the child to extrauterine life. The origins of many chronic diseases lie in the perinatal and neonatal periods of ontogenesis.

According to WHO, 4-6% of children worldwide are born each year with malformations. Gastrointestinal (GI) malformations are the third most common malformation, and the number of children with neonatal surgical abnormalities is steadily increasing. According to some authors, on average they occur in 29.1% of cases. Thus, according to the Institute of Health statistics of the Republic of Uzbekistan for 2018, the prevalence of GI tract abnormalities ranges from 13.0-26.4 per 10,000 live births. In the city of Samarkand, GIT abnormalities occur in 0.76 per cent of cases.

Among them, those detected immediately after birth are between 2.5 and 4.5% and, during the first year of life, as high as 5%. Their impact on the overall structure of infant mortality is increasing. Premature babies account for up to 28% of the group of malformations. Premature birth defects are also the leading cause of perinatal mortality. Studies conducted in different countries have shown that 25-30% of all perinatal losses are due to anatomical organ defects. Among stillborns, CHDs are detected in 15-20% of cases. During the 1st year of life, 25% of all child deaths are due to congenital malformations.

In recent years, advances in neonatal surgery have had an impact on the development of medical technology. The radicalisation of tactics and the active development of paediatric surgery and operative techniques for patients with congenital malformations have been universally noted. However, despite significant progress in neonatal surgery and intensive care, the results for infants with surgical conditions such as atresia, stenosis, and fixation disorders of various parts of the intestinal tube remain disappointing. The negative results of treatment can be explained by the absence of unified effective treatment schemes and algorithms; the problem of optimizing the timing of surgical aid remains unresolved, and there is no unified viewpoint on the methods of preoperative and postoperative period management. In addition, in more than 80% of cases, surgical diseases are combined with severe somatic neonatal pathology: prematurity, intrauterine infection, respiratory distress syndrome, perinatal central nervous system damage, etc. In some cases it is these pathological conditions that mask the presence of congenital anomalies and determine the severity of the child's condition in early life. The current treatment tactics are based on the principles of early radical correction of surgical pathology. At the same time, the lowering of the age limit for surgery is not due to the fact that technical conditions for it have appeared, but rather to the desire to obtain optimal results and reduce the number of complications. The State programme on maternal and child screening regulates the conduct of ultrasound examinations in early pregnancy in Uzbekistan. A comprehensive organizational structure has been

established for the provision of specialized medical genetic care; the priority in the activities of the screening centres is prenatal screening of pregnant women to detect congenital and hereditary diseases of the foetus. The introduction of endosurgical surgery for congenital intestinal obstruction with malrotation in newborns is a new and promising field, which has so far only been available in the leading centres of paediatric surgery. Despite obvious successes in the diagnosis and treatment of children with this pathology, this problem is still urgent primarily because of the risk of severe complications, leading to death in 45% to 76% of cases, associated with delayed diagnosis, or the use of the wrong treatment tactics. Thus, the high mortality rates of newborns with GI tract abnormalities dictate the search for ways to improve surgical care, and the development of entirely new approaches and tactics in structuring follow-up to reduce mortality and disability.

2.PURPOSE OF THE STUDY:

To substantiate scientifically the ways to optimize the results of treatment and to improve the quality of medical care in surgically correctable congenital malformations.

3.MATERIAL AND METHODS.

We have studied the data of 149 newborns with GIT abnormalities treated in the Regional Pediatric Multiprofile Medical Center in the past 3 years and the newborns of 2 clinics with GIT abnormalities, Samarkand Medical Institute (2019-2020). In the first hours after birth they underwent emergency surgical intervention.

The patient study consisted of the following methods:

-informational (analysis of regulatory documents);

- socio-hygienic (excerpting of data, expert evaluation and analysis of the data obtained);

- statistical data.

The organizational measures analysis in the health care system in Samarkand and Samarkand region was carried out. The transportation conditions and nursing conditions of newborns were analyzed. The work used variation statistics with descriptive statistics, two-sample t-test with the same and different variances. The arithmetic mean (M), standard deviation, and error of representativeness were calculated (±m).

4.RESEARCH RESULTS:

Among all examined newborns with CMF GIT, esophageal atresia prevailed (22.1%), then in the following sequence: congenital diaphragmatic hernia (16.8%), high intestinal obstruction (15.4%), anus atresia (14.8%), abdominal wall defects (12.8%) and low intestinal obstruction (11.4%). Surgery was performed on 130 newborns (87.2%). In 19 newborns, surgical interventions were not performed due to an extremely serious condition due to the multiple congenital defects and concomitant diseases presence. After the CMF GIT establishment among 34 newborns, surgical interventions were carried out at a later date after condition stabilization. The gestational age of the newborns ranged from 26 to 42 weeks. Premature infants were found in 35.6% cases, full-term - 58.4%, and post-term - 6.0%. Among all newborns, boys were encountered in 56.4% cases, and girls - in 43.6% cases. The largest number of mothers of children with CMF were between 26 and 34 years old (44.3%) and 25-39 years old (39.6%). When analyzing the anamnestic data, we found that the main reasons for the CMF development include the influence of environmental, industrial and social factors, as well as the bad parents' habits, and malnutrition. In the factorial analysis, we identified the main factors contributing to the CMF development in newborns - low somatic status of the mother, chronic gynecological diseases, the multiple abortions, miscarriages presence, as well as the psychoemotional status of a pregnant woman. When analyzing the newborns intake with CMF GIT, we found that the smallest number was recorded among the urban population (34.2%), while the newborns intake with CMF GIT from Samarkand region exceeded the indicators by almost 2 times (65.8% versus 34, 2% respectively). The data obtained indicate that it is necessary to improve the complete and comprehensive examination organization among the districts and regions population in order to identify this pathology at an early stage, both among pregnant women and among newborns. When interviewing mothers of newborns with CMF GIT, it was found that taking on dispensary registration for pregnancy also had its effect, so most pregnant women took up the study before 24 weeks (41.6%), before 12 weeks - 36.2%, and before 38 weeks - 20.2%. The data obtained testify to the untimely registration of pregnant women. When analyzing the socio-biological factors in the CMF GIT development in children, it was found that 67.7% mothers were housewives, single-parent families were encountered in 14.1% cases, 5.8% cases were not registered with an obstetrician-gynecologist, in 15, in 4% cases the mother was over 34 years old, 15% mothers had bad habits, and 8.6% were treated for sexually transmitted infections. Complications in childbirth were noted by 42.9% women; subsequently, 16% had a caesarean section. Ultrasound diagnostics revealed CMF GIT in 34% women, while in 43.4% cases en 31- 34 weeks. When analyzing the transportation conditions, we found that 83.3% newborns with CMF GIT were admitted to the surgical hospital within 1 hour, in 16.7% cases, transportation to the surgical hospital took more than 3-4 hours; these are newborns from remote settlements. Agreed transfers between institutions were in 92.9% cases, in other cases, transfers were not agreed. Moreover, these children were transported without preparation for transportation to the surgical department in not equipped vehicles (there is no high-frequency artificial ventilation apparatus, minimum equipment). Among the reasons for late admission in 4 cases due to unjustified refusal to probe the esophagus, the condition severity in 3 cases was late defect diagnosis. 3 children were admitted from remote places of birth from a surgical hospital. Among the reasons for diagnostic errors in 87.5% cases was the

clinical picture underestimation and incorrect interpretation of radiographs. Mortality among newborns with CMF GIT was 67.9%. Among the dead, children with esophageal atresia, duodenal atresia, congenital diaphragmatic hernia prevailed. As a result of the data obtained, we found that the unfavorable results of treatment, as well as postoperative complications, directly correlated with timely diagnosis, the admission timing to the surgical hospital, transportation conditions, concomitant diseases, and correct preoperative preparation. As a result of late diagnosis, inadequate and incorrect therapy at transportation stages, complications arose in newborns with CMF. Thus, artificial lung ventilation in esophageal atresia with tracheoesophageal fistula in the preoperative period aggravated aspiration pneumonia and untimely respiratory therapy in neonates with CMF GIT was the cause of hypoxemia with the development of tissue hypoxia with the outcome in multiple organ failure. Thus, the reasons study for the CMF GIT development in newborns confirms the multifactoriality: socio-biological factors and extragenital diseases. Conclusions: 1. Deficiencies in the medical care organization for pregnant women with CMF GIT in the fetus, characterized by untimely registration, low prenatal diagnostics level and insufficient equipment of ultrasound rooms in remote areas and regions were identified. 2. Non-compliance with the newborns transportation principles with CMF GIT to the surgical hospital, as well as late delivery within 1 hour or more, was revealed. 3. The reasons for diagnostic errors in most cases are the lack of the doctor qualifications and lack of the clinical manifestations knowledge of CMF GIT, failure to comply with diagnostic standards, as well as errors in assessing the clinical picture against the concomitant pathology background and other malformations

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