

CHARACTERISTICS OF SURGICAL TREATMENT OF ROTARY CHEST DEFORMATION IN YOUNG CHILDREN

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Abstract: In today's world, depending on the degree of severity, shape and size of chest deformities, chest symmetry, patient heredity, children's age and accompanying functional disorders, each has its own positive and the development of new treatment methods with adverse properties remain among the most pressing researches in pediatric surgery, large randomized clinical trials comparing existing surgical techniques are being conducted and research is being conducted on new approaches that improve the effectiveness of existing techniques.

Key words: Musculoskeletal, Chest, Deformation, Defect, Scar.

Introduction: According to the World Health Organization, "...all over the world, disorders and diseases of the musculoskeletal system are the leading factor leading to disability, and due to the limitation of movement, a person's life in society is reduced, his level of well-being causes a decrease and early termination of working capacity...". According to the results of the Global Burden of Disease study 2019, 1.71 billion people in the world suffer from diseases of the musculoskeletal system. 90-95% of all chest deformities are gyrus (KQGD) and keel deformities (KQKD), both of which lead to a decrease in the quality of life in children due to physical and mental disorders, an increase in disability indicators, and cosmetic and functional disorders make it surgical. requires elimination. Despite the fact that many methods of surgical removal of chest deformities have been proposed, controversial issues regarding the choice of treatment and management tactics for patients remain³. Complications and unsatisfactory results after surgical treatment of this defect reach 20%, and sometimes life-threatening complications are the basis for conducting scientific research in this direction. The development of this direction by developing low and minimally invasive methods of chest reconstruction in children with KQGD is important in improving the early and late results of treatment of this category of patients.

Literature analysis: a number of important scientific results were obtained on the basis of scientific research conducted in the world to improve the effectiveness of methods of diagnosis and treatment of chest deformities, including: chest as part of birth defects of musculoskeletal organs found in children It has been found that the occurrence of various forms of chest deformities, the development of associated pain, respiratory and cardiovascular complications, cosmetic defects and mental disorders have a negative impact on the quality of life (Departments of Surgery (Division of Pediatric Surgery) and Thoracic Surgery, Icahn School of Medicine at Mount Sinai Hospital, USA); Among chest deformities, according to the epidemiological description of KQGD and KQKD, the high occurrence of both forms in boys (in the ratio of 2-9:1) has been proven (University of Health Sciences, Gülhane Training and Research Hospital, Turkey; West Virginia University, USA); respiratory and cardiovascular disorders are less common in girls diagnosed with KQKD than in boys (Pediatric Pulmonology Unit, Department of Paediatrics,

Gynecology and Obstetrics, Geneva University Hospitals and University of Geneva, Switzerland), but significant pain syndrome It is proven to meet (Ann and Robert H Lurie Children's Hospital of Chicago, USA); It has been proven that the development of chest deformities is caused by the influence of genetic factors that lead to pathological changes in the ribs, as well as genetically determined disorders of the connective tissue (I.M. Sechenov 1st Moscow State Medical University, Russia); Although there have been enough studies on the conservative treatment of chest deformities, it has been recognized that it is not effective enough to fully restore the quality of life (Department of Pediatric Surgery, The Montreal Children's Hospital, McGill University Health Centre, Canada) , with excellent cosmetic efficiency in open resection methods of various modifications (Department of Thoracic Surgery, Institute of Tuberculosis and Lung Diseases, Rabka-Zdrój, Poland, in these operations, wavy, "Mercedes"-shaped incisions, tissues A high incidence of early complications associated with layer-by-layer resection was noted (Department of Plastic, Reconstructive and Aesthetic Surgery, Medical University Innsbruck, Austria), without rib resection using metal plates performed operations have been proven to be highly effective, but the contribution of common complications requiring reoperation in the postoperative period has also been found to be high (Department of Surgery, Division of General Thoracic Surgery, Zuyderland Medical Center, The Netherlands), minimally invasive methods under thoroscopic control while the effectiveness of operations performed with segmental resection of ribs while preserving the peritoneum is high, this method has been proven to have some limitations (Department Of Thoracic Surgery, University Of Health Sciences Antalya Training and Research Hospital, Turkey). In today's world, depending on the severity, shape and size of chest deformities, chest symmetry, patient heredity, children's age and accompanying functional disorders, each has its positive and negative aspects. The development of new therapeutics with the properties remains one of the most urgent researches in pediatric surgery, large randomized clinical trials comparing existing surgical techniques are being conducted and research is being conducted on new approaches that improve the effectiveness of existing techniques. However, despite the technical achievements in this field and good results, the existing methods are not considered sufficient to fully restore the quality of life of sick children. The fact that more than 100 surgical methods have been proposed for the treatment of chest deformities also indicates that this problem has not found its solution. Prospective development of this scientific direction through the development of low and minimally invasive methods of treatment of chest deformities in children allows to improve the immediate and late results of treatment in this category of patients.

Results: In evaluating the results of surgical treatment of KD, we studied divided into 3 periods: operative time, early and long postoperative periods. The evaluation of the results during the operation was based on indicators such as bleeding, pleural injury, pneumothorax formation. In the assessment of the early period, the duration of postoperative analgesia and its description (whether with narcotic or non-narcotic analgesics), transfer of the patient to a vertical position and activation, wound healing status, length of stay in the hospital after surgery, sternum criteria such as the state of holding the complex in the tire were taken as a basis. In the evaluation of the long-term results, the condition of the chest (recurrence, local deformations), the condition of the postoperative scar, the condition of physical development, the presence of chondromas, and the avoidance of the place of attachment of the ribs. Long-term results were evaluated using 3 criteria.

1. Good - the patient has no complaints, the deformity is completely eliminated, the chest is in a normal position, the scarring of the wound is normotrophic, the physical development

corresponds to the age indicators, functional changes in the cardiorespiratory system have disappeared. .

2. Satisfactory - the patient has no complaints, the sternum is in a straight position, there is a local change in the ribs, there is roughness in the seams, displacement of the ends of the ribs, the presence of chondromas, physical development is in accordance with young indicators. correspondingly, functional changes in the cardiorespiratory system were lost.

Unsatisfactory - recurrence of deformation, lagging behind physical development, functional changes in the cardiorespiratory system are preserved,

Results of surgical treatment of patients treated by the Ravich-Gross method with the diagnosis of thoracic gyros deformity.

The clinical data of 77 patients treated in the thoracic surgery department of Andijan Regional Children's Multidisciplinary Medical Center during 2005-2010 were studied. Complications encountered during the operation of the patients were concluded by studying the operation report. The results of the study showed that in 18 (23.4%) patients bleeding was observed as a result of damage to intercostal blood vessels during separation of the peritoneum. The most common complication of this group of patients during surgery was pleural injury in 22 (28.6%) patients. Because of this, the needle has been shown to damage the pleura when passing the traction thread through the sternum to pull the external tire. Due to pleural damage, 11 (14.2%) patients developed pneumothorax, and patients had chest drains installed during surgery.

In the early postoperative period, almost all patients experienced severe pain due to compression of the ribs through the legs when the force exerted on the sternum by pulling the sternum with a traction cord and externally pulling the Marshev tire on the sterno-costal complex, therefore, all patients used narcotic analgesics for the first 4 ± 0.12 days after surgery. During the next 7 ± 0.3 days, when the child was walking, the movement of the traction cords due to the weight of the tire caused pain and led to anesthesia with nonnarcotic analgesics. Patients are allowed to walk slowly from 3-4 days after the operation due to mental adaptation to the splint and increased pain during activation. Secondary wound healing was observed in 12 (15.6%) patients. The duration of treatment of patients in the hospital was 14 ± 0.84 days. 8 (10.4%) patients had purulent inflammation of the sterno-costal complex around the traction cords, 4 (5.2%) patients had a tire fracture due to a fall, and 6 (7.7%) patients had a traction cord injury. premature termination was observed. All of these patients had recurrence of the deformity. Dislocation of attached ribs was found in 9 (11.6%) patients. the above cases were mainly observed in the period up to two months after the operation.

Long-term postoperative results were studied in 50 (64.9%) patients by evaluation criteria at the time of re-examination and based on the conclusions of the outpatient card. Recurrence of deformation was observed in 12 (24.0%) patients, all of whom underwent thoracoplasty. Local deformations of the ribs were observed in 9 (18.0%) patients. Wound roughening or keloid scar formation in 11 (22.0%), attached chondromas in areas after rib resection in 1 area in 4 (8.0%) patients, 2 in 8 (16.0%) patients met in more fields. In 6 of these patients, these areas were opened and the part of the peritoneum was removed. Parents of 13 patients refused the operation. Also, displacement of the ribs from the attached area was observed in 5 (10.0%) patients. These patients were re-operated and the ribs were attached. In 12 (15.6%) patients there was a delay in physical development in relation to age.

By studying the long-term treatment results of patients treated surgically with the Ravich-Gross method, it was concluded that 42 (54.5%) patients had good results, 17 (22.0%) patients had satisfactory results, and 19 (24.7%) patients had unsatisfactory results.

Conclusion: According to the results of the analysis, it was observed that KQGD is more common in preschool age (39.0%), in boys (63.0%). It was found that 80.6% of children diagnosed with chest deformity had less than average body weight, lagged behind in physical development, and this indicator had a positive correlation with functional disorders of the respiratory system ($r=1.384$; $p<0, 01$).

2. In 51.4% of cases, KQGD was detected with the birth of a child, and it was observed that the level of the disease increases rapidly, signs of respiratory dysfunction were detected in 66.6% of cases, chronic pneumonia was diagnosed in 34% of cases, and these cases were considered an indication for early surgical treatment of the deformity.

3. As a result of the direct effect of KQD on the excursion of the chest and the volume of the chest cavity, it affects the activity of the organs of the cardiovascular and respiratory systems and leads to a decrease in the functional reserves of the cardiorespiratory system. Both types of the disease cause patients to be unable to perform physical activities as well as their peers. After surgical treatment, functional reserves in the patient's body improve by 3 times in severe types of KQGD, and by 17.4% in III degree.

5. In young children, a minimally invasive method of thoracoplasty is convenient for preventing the rapid increase in the level of the disease, functional changes in the cardiorespiratory system, which can become chronic and cause disability. The use of hemispherical plates to keep the sterno-costal complex in a correct state is convenient for the patient and does not cause discomfort in movement activity. It also allows you to keep the sternum-rib complex in the right position for a long time.

6. In the methods of reconstructive operation performed by KQGDsi, there is no need for metal structures and various ligaments to keep the sternum-rib complex in a corrected state and it is performed in one step. After the operation, the patients return to their usual way of life early, they quickly make up for the lagging physical development, and they develop in line with their peers. In KQGD, 93% of good results were achieved and the recurrence rate was reduced by March 10.

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