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## MINIMALLY INVASIVE REPAIR OF PECTUS CARINATUM AT CHILDREN

### МІНІНВАЗИВНА КОРЕКЦІЯ КИЛЕПОДІБНОЇ ДЕФОРМАЦІЇ ГРУДНОЇ КЛІТКИ У ДІТЕЙ

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Pectus carinatum (PC) is a severe developmental defect characterized by pronounced cosmetic defects [1; 4]. In the domestic and foreign literature, a large percentage of good results of the correction of this pathology by an open method is noted, however, all types of operations are very traumatic, imply a wide surgical access, include manipulations on bone-cartilage and muscle tissues of the chest, while there is a high risk of developing complications in intra- and postoperative periods [2; 3; 5]. In this regard, the need to develop new minimally invasive methods of surgical correction of this malformation of the chest, when with minimal trauma to the skin and the sterno-costal complex, the deformation is eliminated taking into account the aesthetic requirements of the patient, remains relevant.

The purpose of the work is to analyze the results of surgical treatment of PC at children using minimally invasive anterior thoracoplasty.

Object and research methods. On the basis of the Dnipropetrovsk Regional Children's Clinical Hospital operative treatment was carried out for 35 children with II and III degree PC in the stage of compensation and subcompensation. There were 32 boys (91.4%), 3 girls (8.6%). According of classification sterno-costal type I occurs in 15 children (42.85%), costo-sternal type II occurs in 20 children (57.15%). The shape of the deformation was more often elliptical and round. Signs of connective tissue dysplasia were found in all patients. This manifested itself in the form of spine deformation (scoliosis or kyphosis), flat feet, small anomalies of heart development, hypoplasia of lung tissue. Progression of chest deformation

occurred during puberty from 12 to 14 years. All children underwent a comprehensive examination, namely a chest x-ray in 2 projections, spirometry, ECG and echocardiogram of the heart. Operative treatment by the method of minimally invasive anterior thoracoplasty using a titanium bar. The method consists in eliminating KDGK by compression of a titanium plate in the areas of deformation of the front chest wall, the plate is carried out subfascially sternocostally through a previously formed tunnel with two incisions in the front-axillary areas on both sides. Fixation of the plate was performed with a metal wire to two adjacent ribs, thus completely eliminating the possibility of its migration.

Results. Transfusion of erythrocyte mass and blood products was not performed in patients operated on according to this technique. The average duration of surgical intervention was from 60 to 100 minutes. Analgesia with narcotic analgesics was not performed. Epidural anesthesia was applied, which made it possible to transfer patients to a vertical position and allow them to walk on the second day after the operation. Early postoperative complications (conservative treatment of pneumothorax) occurred in one patient (2.85%). In the delayed postoperative period, a rupture of the metal thread of the stabilizers was detected in two patients (5.7%), seroma in one case (2.85%).

The results of treatment were monitored in all patients after surgery. Good results were obtained in 32 (91.4%) cases, satisfactory in 3 (8.6%), unsatisfactory results were not determined.

Conclusions. The use of minimally invasive anterior thoracoplasty with the help of a titanium bar has advantages compared to resection methods, namely: no resection of the ribs and sternum, mobilization of the retrosternal space, shortening of the operation period, less pronounced pain syndrome, no migration of the plate, the deformity is eliminated with a successful functional and cosmetic result .

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В ФІЗИЧНІЙ ТА РЕАБІЛІТАЦІЙНІЙ МЕДИЦИНІ**

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