

**FEATURES OF METHODS OF SURGICAL TREATMENT OF
CONGENITAL LYMPHANGIOMAS IN CHILDREN**

Azamat Mukhitdinovich Shamsiev*; **Shukhrat Abdurasulovich Yusupov****;
Bobir Latibovich Davranov***; **Khomidullo Gaybullaevich Makhmatkulov******

*Professor,

Department of Pediatric Surgery,
Samarkand State Medical University,
Samarkand, UZBEKISTAN

**Head of the department of pediatric surgery,
Samarkand State Medical University,
Samarkand, UZBEKISTAN

***Assistant,

Department of Pediatric Surgery,
Samarkand State Medical University,
Samarkand, UZBEKISTAN

****Assistant,

Department of Pediatric Surgery,
Samarkand State Medical University,
Samarkand, UZBEKISTAN

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ABSTRACT

Lymphangiomas are mature, benign tumors originating from lymphatic vessels, Lymphangiomas can be external (cervical, cervical-axillary-thoracic) and internal (mediastinal, internal organs, retroperitoneal, pelvic). The most common are cervical lymphangiomas - from 74% to 82%. Due to the genetic relationship of lymphangiomas to blood vessels, in particular, to the venous system, their radical removal presents certain difficulties, where they are located close to the main vessels of the neck, axillary region, mediastinum and other localizations. There is no consensus on the question of the stages of excision of lymphangioma. If no one has doubts about the rationality of simultaneous surgical intervention. There are practically no works that raise the question of the cosmetological side of surgical interventions undertaken to remove lymphangiomas. Radically cure lymphangioma by surgical removal is possible only in 75% of cases.

KEYWORDS: *Lymphangioma, Children, Sclerotherapy, Surgical Treatment.*

INTRODUCTION

Lymphangiomas occur as a result of the vicious development of the lymphatic system in the embryo, starting at 6 weeks of age. They belong to mature, benign tumors originating from lymphatic vessels, Lymphangiomas can be external (cervical, cervical-axillary-thoracic) and internal (mediastinal, internal organs, retroperitoneal, pelvic). The most common are cervical lymphangiomas - from 74% to 82%, cervical-axillary-thoracic lymphangiomas occur in 6% of patients, mediastinal localization - in 10-16% of patients, in the abdominal cavity - 1-2%, retroperitoneal location - y 1-2% of patients, pelvic localization - y 1-2% of patients [1, 2].

Due to the genetic relationship of lymphangiomas to blood vessels, in particular, to the venous system, their radical removal presents certain difficulties, where they are located close to the main vessels of the neck, axillary region, mediastinum and other localizations [3]. In this regard, the lymphangiomatoustissue, which is difficult to remove, and therefore remains on large vascular trunks, serves as a source of tumor recurrences, which occur from 6.4% [4, 5].

In addition, there is no consensus on the question of the stages of excision of lymphangioma. If no one doubts the rationality of simultaneous surgical intervention in the removal of intracavitary lymphangiomas, then there are 2 points of view regarding superficial lymphangiomas, especially those with large sizes. One group of surgeons considers it expedient to remove the tumor at the same time, another group of surgeons adheres to the stages of the operation. There are practically no works that raise the question of the cosmetological side of surgical interventions undertaken to remove lymphangiomas. Radically cure lymphangioma by surgical removal is possible only in 75% of cases [6, 7].

Purpose of the research. Analysis of the results of various methods of surgical treatment of lymphangiomas of various localization.

Material and methods of the research. In the period from 1994 to 2019, 186 children with lymphangioma of various localizations were operated in the 2nd clinic of the Samarkand State Medical University. After a complete clinical and laboratory examination and adequate preoperative preparation, the patients were subjected to surgical treatment. Depending on the surgical tactics, they were divided into 2 groups: the control group of 162 patients operated on between 1994 and 2015 - they underwent conventional surgical treatment, which consisted in complete excision of lymphangioma within the surrounding healthy tissues, and the main group of 24 patients who received inpatient treatment in the period from 2016 to 2019, who were minimally invasive surgical treatment in the form of lymphangioma sclerotherapy was applied. This treatment tactic consisted in lymphangioma puncture, which was carried out under the control of ultrasound sonography. The contents of the lymphangioma were aspirated, then doxycycline was injected at a concentration of 10-20 mg / ml, followed by 4x (1 time per day) administration of doxycycline into the lymphangioma cavity through the cannulas left. On the 4th day, the cannulas were removed, a control ultrasound Dopplerography of the residual cavity was performed. In the multicameral form of lymphangioma, cannulas, under ultrasound control, were inserted into each separate cavity of the multicameral cyst.

Results of the research. Lymphangiomas in children were assessed according to the following indicators: the course of the postoperative period, the presence or absence of suppuration of the

residual cavity, the nature of wound healing, the patient's stay in the hospital (bed-day), the duration of temperature (day), ultrasound signs of suppuration and relapse of the disease.

In table 1 below, we give an example of the results of surgical treatment of patients in the control group.

TABLE 1 INDICATORS OF THE POSTOPERATIVE PERIOD IN THE OPERATED PATIENTS OF THE CONTROL GROUP

Localization of lymphangiomas	Terms (days)		Hospital stay (days)
	decrease in body temperature	days in intensive care	
Cervical-head (n-151)	3,2	4,1	7,7
Torso (n-28)	2,6	3,9	12,8
Limbs (n-7)	2,1	1,4	9,3
Total (n=186)	2,6	3,1	9,9

As can be seen from table 1, on average, in the operated patients of the control group, the normalization of body temperature averaged 3-4 days, the stay in intensive care was about 3-4 days, the average stay of patients in the hospital was 7-13 days.

In contrast to the control group, in the main group, these indicators were significantly lower, as shown in Table 2.

TABLE 2 INDICATORS OF THE POSTOPERATIVE PERIOD IN THE OPERATED PATIENTS OF THE MAIN GROUP

Localization of lymphangiomas sclerotherapy	Terms (days)		Hospital stay (days)
	decrease in body temperature	decrease in body temperature	
Cervical-head (n-15)	2,9	-	7,9
Torso (n-8)	3,1	-	8,1
Limbs (n-1)	2,0	-	7
Total (24)	2,6	-	7,6

Table 2 shows that the patients in the main group did not need to be in the intensive care unit after surgery, since the sclerosing drug was administered under local anesthesia, there were no side effects, and after surgical treatment, they were transferred to a regular inpatient department. In this group of patients, the normalization of body temperature averaged 2-3 days, they were not in the intensive care unit, and most importantly, the duration of stay in the clinic did not exceed 8 days.

Despite various methods of treatment, there were no complications in the early postoperative period in the form of wound suppuration, relapse of the disease, and suture divergence in the control group.

The study of long-term results is an objective criterion for evaluating the effectiveness of surgical treatment of patients with lymphangiomas. When checking long-term results, the tasks of studying the health status of patients were set. The evaluation criteria were the study of the following factors: clinical signs; the condition of postoperative scars and the presence of a

relapse of the disease. All the treated patients were under dispensary supervision and were periodically examined in the clinic. The catamnestic examination was carried out in terms from 1 to 15 years.

We considered the long-term results to be **good** in those individuals who did not complain after the surgery, the general physical condition corresponded to their age, postoperative scars do not rise above the skin surface, the latter are soft and painless on palpation, there is no relapse of the disease.

We considered the results **satisfactory** in cases where patients complained of periodic pain in the projection of the postoperative scar, which rise above the surface of the skin, dense and slightly painful on palpation, there is no recurrence of the disease.

Unsatisfactory results were considered when patients complained of pain in the projection of the postoperative scar, the latter are rough, rise above the surface of the skin, soldered to the underlying tissues and deform the surrounding soft tissues, a relapse of the disease is noted (Table 3).

TABLE 3 LONG-TERM RESULTS OF SURGICAL TREATMENT OF LYMPHANGIOMAS

Groups	Good	Satisfactory	Unsatisfactory	Total
Main (n=24)	21 (87,5%)	3 (12,5%)	–	24 (100%)
Control (n=162)	117 (72,2%)	37 (22,8%)	8 (5%)	162 (100%)
Total (n=186)	138 (74,2%)	40 (21,5%)	8 (4,3%)	186 (100%)

As can be seen from Table 3, good results were achieved in the main group of 21 (87.5%) than in the main group of 117 (72.2%). The same results were noted when analyzing the satisfactory results of the treatment, in the main group they amounted to 12.5% to 22.8% of the control group. It should be noted that unsatisfactory results were detected in the control group – 5.0%, in the main group they were reduced to 0%.

Thus, in the period from 1994 to 2019, 186 children with lymphangioma of various localizations were operated in 2 clinics of the Samarkand State Medical University. After a complete clinical and laboratory examination and adequate preoperative preparation, the patients were subjected to surgical treatment. Depending on the surgical tactics, they were divided into 2 groups: the control group of 162 patients underwent conventional surgical treatment, which consisted in complete excision of lymphangioma within the surrounding healthy tissues, and the main group of 24 patients who received minimally invasive surgical treatment in the form of lymphangioma sclerotherapy. This treatment tactic consisted in lymphangioma puncture, which was carried out under the control of ultrasound sonography. The contents of the lymphangioma were aspirated, then doxycycline was injected at a concentration of 10-20 mg / ml, followed by 4x (1 time per day) administration of doxycycline into the lymphangioma cavity through the cannulas left. On the 4th day, the cannulas were removed, a control ultrasound Dopplerography of the residual

cavity was performed. In the multicameral form of lymphangioma, cannulas, under ultrasound control, were inserted into each separate cavity of the multicameral cyst.

The analysis of the immediate results of treatment showed that, on average, in the operated patients of the control group, the normalization of body temperature averaged 3-4 days, the stay in intensive care was about 3-4 days, the average stay of patients in the hospital was 7-13 days. Unlike them, the patients in the main group did not need to be in the intensive care unit after surgery, since the sclerosing drug was administered under local anesthesia, there were no side effects, and after surgical treatment, they were transferred to a regular inpatient department. In this group of patients, the normalization of body temperature averaged 2-3 days, they were not in the intensive care unit, and most importantly, the duration of stay in the clinic did not exceed 8 days. Despite various methods of treatment, there were no complications in the early postoperative period in the form of wound suppuration, relapse of the disease, and suture divergence in the control group.

The study of long-term results is an objective criterion for evaluating the effectiveness of surgical treatment of patients with lymphangiomas. The evaluation criteria were the study of the following factors: clinical signs; the condition of postoperative scars and the presence of a relapse of the disease. All the treated patients were under dispensary supervision and were periodically examined in the clinic. The catamnestic examination was carried out in terms from 1 to 15 years.

Long-term treatment results were evaluated on a 3-point scale: good, satisfactory and unsatisfactory. Good results were achieved in the main group of 21 (87.5%) than in the main group of 117 (72.2%). The same results were noted when analyzing the satisfactory results of the treatment, in the main group they amounted to 12.5% to 22.8% of the control group. It should be noted that unsatisfactory results were detected in the control group – 5.0%, in the main group they were reduced to 0%.

CONCLUSIONS

Analysis of the results of surgical treatment of lymphangiomas of various localization has shown that the generally accepted traditional method of treatment is quite effective, but requires the patient to be in the intensive care unit after surgical treatment, unlike in the main group, due to the fact that surgical treatment is carried out under local anesthesia, this is not required. The proposed minimally invasive tactics for the treatment of lymphangiomas makes it possible to achieve good treatment results in the long-term period in 87.5% of patients and reduce the recurrence of the disease to 0%.

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