



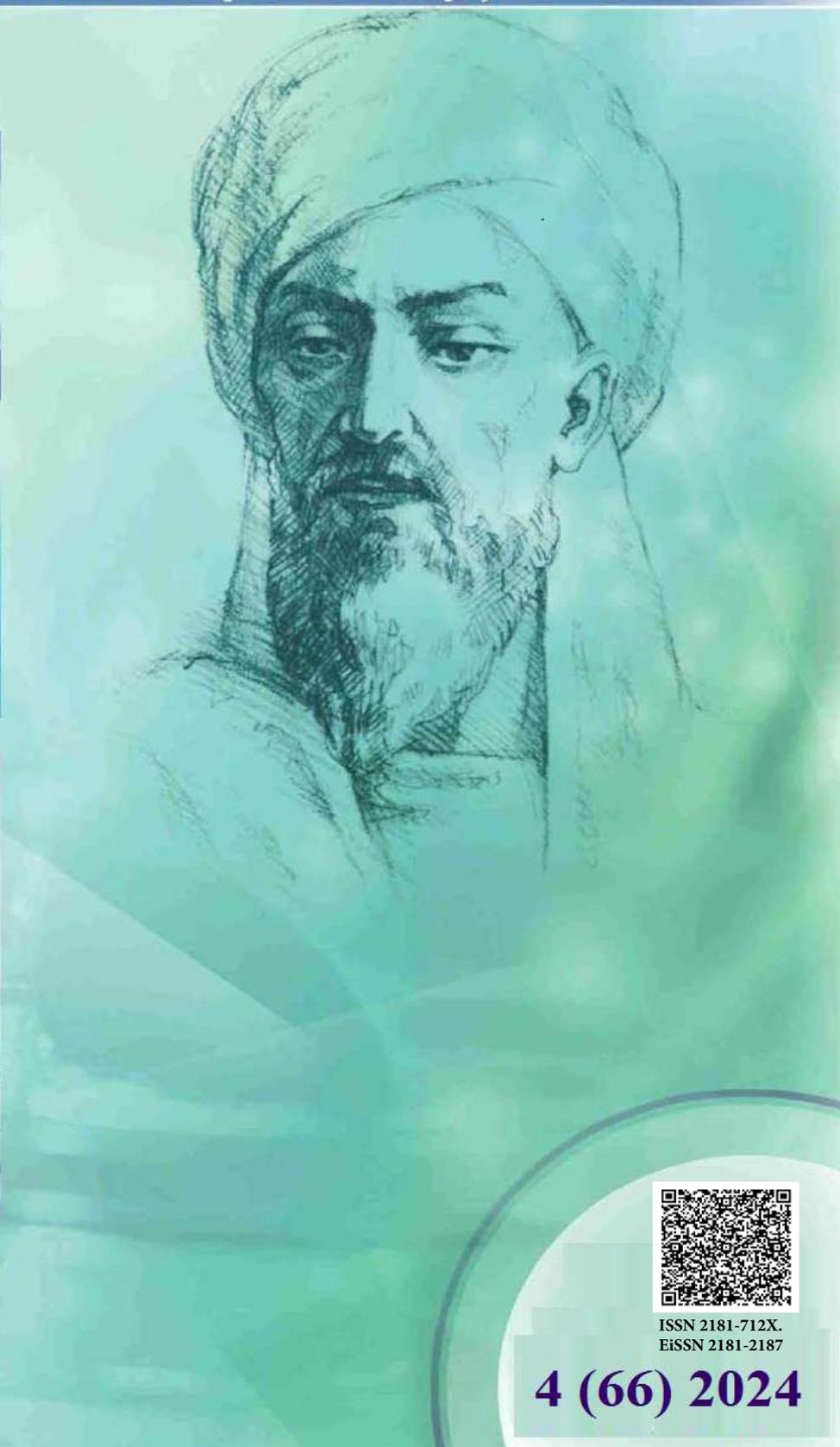
**New Day in Medicine**  
**Новый День в Медицине**

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НОВЫЙ ДЕНЬ В МЕДИЦИНЕ  
NEW DAY IN MEDICINE**

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## THE IMPORTANCE OF ENDOVIDEOLAPAROSCOPIC SURGERY IN THE TREATMENT OF VARICOCELE IN ADOLESCENT CHILDREN

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### ✓ Resume

*Improvement of the videolaparoscopic method of treatment of varicocele in adolescent urology is given importance to evaluation of minimally invasive methods. Different surgical methods of minimally invasive varicocele treatment are also compared. In each case, a differential approach is required when deciding on the choice of surgical treatment. If patients have bilateral varicocele, videolaparoscopic surgery is performed at the same time. Videolaparoscopic operations in the treatment of varicocele allow to reduce the number of postoperative complications and increase the results of treatment. The choice of surgical intervention for varicocele in adolescents should be determined not only by its clinical effect, but also by economic efficiency.*

*Key words: varicocele, videolaparoscopy, surgical methods*

## ЗНАЧЕНИЕ ЭНДОВИДЕОЛАПАРОСКОПИЧЕСКОЙ ХИРУРГИИ В ЛЕЧЕНИИ ВАРИКОЦЕЛЕ У ДЕТЕЙ ПОДРОСТКОВОГО ВОЗРАСТА

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### ✓ Резюме

*Совершенствование видеолaparоскопического метода лечения варикоцеле в подростковой урологии придает важное значение оценке малоинвазивных методов. Также сравниваются различные хирургические методы малоинвазивного лечения варикоцеле. В каждом случае необходим дифференцированный подход при решении вопроса о выборе хирургического лечения. При двустороннем варикоцеле одновременно проводят видеолaparоскопическую операцию. Видеолaparоскопические операции при лечении варикоцеле позволяют уменьшить количество послеоперационных осложнений и повысить результаты лечения. Выбор хирургического вмешательства при варикоцеле у подростков должен определяться не только его клиническим эффектом, но и экономической эффективностью.*

*Ключевые слова: варикоцеле, видеолaparоскопия, хирургические методы.*

### Relevance

Varicocele is a disease of the reticular expansion of the varicose veins, which often develops on the left side (up to 85%). Although it is found in children and adolescents in many cases, due to the fact that the diagnosis was not made in time, it was determined that the place of examination by doctors

of the draft commission was mainly determined. In the pathogenesis of varicose veins of the testicular system, the reverse return of blood is important, due to the congenital absence of valves in the testicular vein, it is caused by venous hypertension as a result of the pressure of the renal veins (primary varicocele). Sometimes it can also be caused by narrowing of the left renal vein (secondary varicocele), or arterio-venous fistulas and also by retroperitoneal fibrosis [1].

It is important to note that among the causes of male infertility, varicocele is observed in 39% to 50% [2, 6], and in the prevention of sub- and infertility, identification and treatment of varicocele is important from a social point of view. In addition, 20-90% of patients with varicocele have spermatogenesis disorders [6, 7]. Bilateral varicocele causes significant negative changes in the spermogram up to azoospermia and is one of the unfavorable prognostic factors in terms of the development of infertility in men [1, 5, 7].

**The purpose of the study:** In children using endovideolaparoscopic surgical procedures, improving modern treatment tactics of aricocele disease.

### Material and methods

Republic Children's minimally invasive and endovisual scientific-practical center In 2012-2023, the methods of surgical treatment of 195 children were analyzed. Yu.F. Isakov and A.P. Erokhin classifications were used to determine varicocele levels.

Diagnosing varicocele mainly included traditional examinations. (Objective examination, complaint, testicle palpation, functional tests, ejaculate analysis and dopplerography, venography, contact thermography and computer tomography methods are used). As a result, thanks to the use of modern research methods, the detection rate of varicocele has increased to 30%. Most often, varicocele disease occurs in adolescents aged 10 to 17 years. The frequency of the disease in adolescents varies with age: in preschool age it does not exceed 0.12%, in school-aged boys it is from 2.2% to 10%, and among conscripts from 2.3% to 25%.

**Table 1**

**Distribution of patients by age and grade (n-195).**

Degrees of varicocele	10-14 years old	15-17 years old	Total
Left sided level 1	11 (5.6%)	52(26.7%)	63(32.3%)
Level 2 left sided	17(8.7%)	31(15.9%)	48(24.6%)
Level 3 left sided	28(14.3%)	47(24.2%)	75(38.5%)
Bilateral level 2- 3	2(1.0%)	7(3.6%)	9(4.6%)
Total	58(29.6%)	137(70.4%)	195(100%)

With the help of UTT dopplerography, the diagnosis was clarified based on the varicose expansion of the left testicular veins and its levels. In 100% of cases, varicocele occurs on the left side. Bilateral varicocele was found in 9 (4.6%) patients during UTT dopplerography examination. Their average age was  $13.6 \pm 0.8$ .

Patients were divided into two groups. The first group consisted of 67 patients who were operated on in the traditional Ivanisevich method. In the second group, 128 patients underwent endovideolaparoscopic surgery. Carl Storz fitting equipment was used for these operations.

### Result and discussions

Surgical procedures performed by traditional methods averaged  $25 \pm 5$  minutes, surgical procedures performed by endovideolaparoscopic method averaged  $20 \pm 4$  minutes. In endovideolaparoscopic surgical procedures, there were no complications in the pre- and post-operative periods, only in 1 patient who underwent the traditional method, recurrence of varicocele was observed, which was eliminated with the help of videolaparoscopic surgery. In order to identify pain syndromes in patients, questionnaires were created and distributed to patients before the discharge epicrisis. Pain syndromes were evaluated in patients on the 3rd and 7th days and in the first months after the operation. It became clear that pain syndromes were observed more often in the children of the 1st group who underwent traditional surgical procedures, and in the patients of the 2nd group no pain syndromes were observed.

### Conclusion

When varicocele in children is performed videolaparoscopically, it reduces the trauma of the operation, reduces the risk of the formation of rough postoperative scars, reduces the time taken for the operation and the recovery of the patient's physical activity and bed days, improves the patient's life activity, prevents infertility and leaves a good cosmetic effect.

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