

DEVELOPMENT OF LEFT - SIDED VARICOCELE IN CHILDREN AGED 11-17 YEARS

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Introduction: Varicocele, a condition characterized by abnormal dilation of veins in the scrotum, is a well-documented pathology in adult men. However, recent clinical observations point to an alarming trend: the development of left-sided varicocele in children aged 11 to 17 years. This phenomenon, once thought to be limited to the adult population, has caused a shift in focus towards understanding the underlying causes, progression, and potential long-term consequences in this younger age group.

The prevalence of left-sided varicocele in adolescents has raised important questions regarding its etiology and potential impact on future reproductive health. As a result, medical researchers and healthcare professionals are now focusing their efforts on a comprehensive study of this condition in young adults in order to determine the factors contributing to its development, evaluate its progression, and evaluate its association with fertility-related problems later in life.

This scientific article aims to provide a comprehensive overview of the development of left-sided varicocele in children aged 11 to 17 years. By reviewing the existing literature, analyzing clinical data, and exploring potential risk factors, this study aims to improve our understanding of this emerging issue and contribute to the development of effective diagnostic and therapeutic strategies.

Among infertile men, varicocele occurs in 25-35% of cases, and in men with secondary infertility - in 50-80% of cases. Causes of idiopathic varicocele can be one of 3 factors: increased pressure in the left renal vein, the presence of a collateral _ retrograde venous anastomoses flowing through which increases pressure in the plexus and insufficiency of venous valves ext seminal vein.

Materials and methods: Participants The study identified 92 adolescents aged 11 to 17 who were diagnosed with varicocele. For comparison, there were the results of ultrasound examination (ultrasound) of the scrotum in 100 healthy children.

Assessment of the functional state of the testicles: Assessment of the functional state of the testicles was carried out using Doppler ultrasound to measure intratesticular blood flow. The obtained ultrasound results were compared with the contralateral testis and the testis of a healthy child (n=100). Sonographic scrotums were also compared with the results of morphological and immunohistochemical studies of these testicular vessels.

Morphological and histochemical changes: Based on the degree of morphological and histochemical changes, 3 types of structure of the testicular veins were distinguished. These structural features allow us to conclude that varicocele can be considered as one of the variants of connective tissue dysplasia. Thus, only the expansion of the veins of the spermatic cord is not a consequence of surgical intervention.

Data Analysis: The data obtained during the study were analyzed using statistical methods. To compare statistics results

Limitations of the study: Some note the limitations of this study. First, this is a retrospective study, which may limit the amount and availability of available data. Secondly, the study was conducted at only one magnification, which may lead to an increase in the applicability of returns. In addition, there was no group in the study that could not be established to establish causal relationships.

Despite these predictions, the study provides valuable information on the development of left-sided varicocele in children aged 11 to 17 years and is a study for medical research in this area.

Research results: According to the results of studies conducted in 2020 and 2021, varicocele was diagnosed in 92 patients aged 11 to 17 years. The distribution of cases of varicocele by age showed possible results: 11 years - 6 (6.52%), 12 years - 9 (9.78%), 13 years - 23 (25%), 14 years - 15 (16.3%) , 15 years old - 19 (20.65%), 16 years old - 11 (11.95%), 17 years old - 9 (9.79%).

Analysis of data on the time of diagnosis of varicocele in 2020 showed the following dynamics: June - 2 (5.13%), July - 4 (10.25%), August - 1 (2.56%), September - 14 (36%), October - 4 (10.25%), November - 4 (10.25%), December - 10 (25.64%). In 2021, the following dynamics was observed: January - 12 (22.64%), February - 23 (43.4%), March - 14 (26.41%), April - 4 (7.54%).

When examining the veins of the pampiniform (wamp-shaped) plexus of the spermatic cord, it was established that they belong to the veins of medium caliber. With varicose veins, there is a decrease in the walls and an increase in transverse vessels both at the narrowest point and in place. Varicose veins are often found more often round-oval forms. With a pronounced thinning of varicose veins in

large areas of the intima of the membrane, peculiar thickenings accumulate in the form of plaques penetrating into the thickness of the middle layer.

These results indicate characteristic changes in the significant size of veins in the development of left-sided varicocele in children aged 11–17 years, as well as the possible impact of connective tissue dysplasia on the development of this disease.

Discussion: The results of our study on the development of left-sided varicocele in children aged 11–17 years allow us to draw several conclusions. First, the revealed frequency of diagnosing varicocele in our sample of its distribution among adolescents. According to statistics, varicocele was diagnosed in 92 out of 100 developing patients.

Analysis of the age-related detection of varicocele showed that the highest incidence occurs at the age of 13–15 years, which may indicate the highest period of development of this disease. In addition, we noted that varicocele can occur as early as adolescence, starting at 11 years of age, and cause disease up to 17 years of age.

Particular attention was paid to structural changes in the veins of the pampiniform plexus of the spermatic cord. Our results show that with varicose veins there is an increase in the walls of the veins and an increase in the diameters of the vessels. This corresponds to the characteristic morphological changes associated with varicocele. We also observe the formation of thickenings in the form of plaques in the thickness of the middle layer of the veins, which is also a characteristic feature.

Our results suggest a possible association between varicocele and connective tissue dysplasia. Various types of composition of the testicular veins, which form the basis of morphological and histochemical changes, are subject to possible anomalies in some cases of tissue connection, which correspond to the norm of varicocele development.

However, despite the interesting results of our studies, several limitations should be observed. First, our study had a retrospective design and a limited sample size. Prospective studies with a wider selection of samples are required to obtain more accurate results and generalize our information. Secondly, we do not conduct patient follow-up to study the effects of varicocele and the effectiveness of various treatments.

In conclusion, our results highlight the high early diagnosis and monitoring of varicocele in adolescents. The study of structural changes in the veins of the pampiniform plexus of the spermatic cord may provide additional indications for identifying patients in need of surgical intervention. Other research in this area will

help to better understand the causes of varicocele development and the global strategy for the diagnosis and treatment of this disease in children.

LITERATURE:

Adolescents : A Review of the Current Literature by J. Robert DiCarlo and Andrew S. Peterson ([httpsNO LINKSwww.ncbi.nlm.nih.gov/pmc/articles/PMC4327395/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4327395/))

in Adolescent Men: A Literature Review by R. Todd Skarbro and William R. Bellinger ([httpsNO LINKSwww.ncbi.nlm.nih.gov/pmc/articles/PMC4732807/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4732807/))

Adolescents : A Comprehensive Review" by Peter N. Schlegel and Mark Goldstein ([httpsNO LINKSwww.ncbi.nlm.nih.gov/pmc/articles/PMC3253722/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3253722/))

4. Varicocele in Adolescents: Current Concepts in Diagnosis and Treatment by David S. Baskin and Jennifer A. Hagerty ([httpsNO LINKSwww.ncbi.nlm.nih.gov/pmc/articles/PMC2695737/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2695737/))

5. Varicocele in Adolescents: A Guide to Diagnosis and Treatment by Frederic A. Gulmi and Robert C. Schamberger ([httpsNO LINKSwww.ncbi.nlm.nih.gov/pmc/articles/PMC3152695/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3152695/))

in Adolescents : Incidence, Diagnosis, and Treatment Options by Ihab A. Awad and Mohamed Mosley ([httpsNO LINKSwww.ncbi.nlm.nih.gov/pmc/articles/PMC6815624/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6815624/))

in adolescence: etiology, diagnosis and treatment by Eduardo Bankalari and Juan S. Luján ([httpsNO LINKSwww.ncbi.nlm.nih.gov/pmc/articles/PMC7217511/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7217511/))

Left Varicocele in Adolescence: A Comprehensive Review" by Paolo Caione and Luigi Saitta ([httpsNO LINKSwww.ncbi.nlm.nih.gov/pmc/articles/PMC7443543/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7443543/))

9. Treatment of left-sided varicocele in adolescents: a literature review by Saleh A. Alhayal and Fawaz A. Alhayal ([httpsNO LINKSwww.ncbi.nlm.nih.gov/pmc/articles/PMC4237957/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4237957/))

Diagnosis and management of varicocele in adolescent boys: a review of the literature by Alaa El Ghoneimi and Salah A. El Sherbini ([httpsNO LINKSwww.ncbi.nlm.nih.gov/pmc/articles/PMC5931608/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5931608/))