FEATURES OF THE CLINICAL PICTURE OF TESTICULAR TORSION AND ITS APPENDAGE IN CHILDREN

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***Resume**. The issues of developing diagnostic criteria and tactics for the treatment of emergency conditions of the genitourinary system in children based on the use of methods of complex urological examination are relevant to date. The aim of the study was to identify the features of the clinical picture in children with testicular torsion and its appendage. The paper presents the results of a prospective controlled study in 142 patients with emergency pathology of the genital organs. The basis for the diagnosis of nosological varieties of acute genital diseases in children was the characteristic of the local status. The diagnostic value of the local status is considered separately for patients with Morgagni hydatid torsion and testicular torsion. The analysis of the clinical picture carried out in the study revealed the possibilities of expanding the list of anamnestic and clinical symptoms and including them in the existing list of basic diagnostic signs.*

***Keywords:** testicular torsion, Morgagni hydatide, children, clinic, diagnosis.*

Relevance. The increased attention of researchers to the reproductive potential of children and adolescents in recent decades is due to the deterioration of the somatic health status of the younger generation and the increasing proportion of reproductive system organ pathologies. According to various authors, 60% of young men examined under dispensary observation have diseases that threaten their future reproductive function (1, 2, 5).

Despite the constant interest of domestic and foreign authors in the problems of emergency andrology of childhood, the issues of diagnosis and this pathology have not been definitively resolved, and there are no unified approaches to assessing the morphofunctional state of the urogenital system. In this regard, there are no criteria that

definitively determine the treatment tactics, the appropriateness, and timeliness of organ-preserving surgeries (3, 4, 6, 7).

Therefore, the issues of developing diagnostic criteria and treatment tactics for urogenital system emergency conditions in children based on the use of comprehensive urological examination methods are relevant to date.

Goal. Based on the analysis of objective examination results, identify the features of the clinical picture of testicular torsion and organ hydatids in children.

A prospective controlled study was conducted in 142 patients with acute genital pathology hospitalized in the surgery and combined trauma department of the Samarkand branch of the Republican Scientific Center for Emergency Medical Care for the period from 2020 to 2021.

According to the data presented in the following Figure 1, the majority of patients with acute testicular diseases were patients with "Swelling Sphenoid Syndrome," of which testicular torsion was diagnosed in 41 (28.9%) patients, torsion hydatids in 29 (20.4%) children, and inflammatory diseases of the testicles (orchoepididymis).

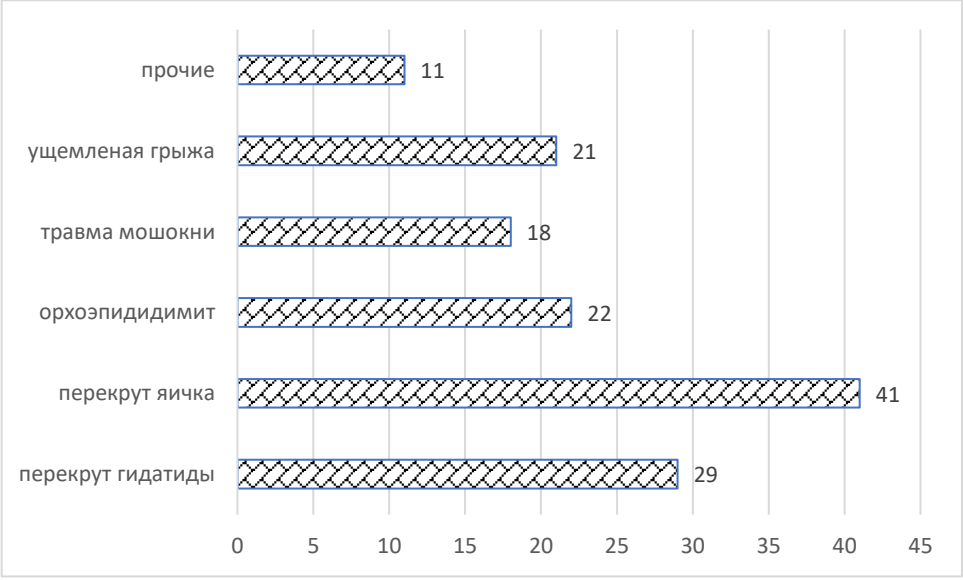

Figure 1. Causes of acute surgical diseases of the genital organs in boys

Upon admission to the hospital, a comprehensive examination was conducted, including examination, medical history collection, a standard set of laboratory indicators,

instrumental research methods: ultrasound with dopplerography. The diagnosis of nosological variants of acute genital diseases in children was based on the characteristics of the local status. Local examination data were analyzed: presence or absence of local inflammatory changes, pain. Symptoms characteristic of individual nosological units of urogenital system emergency diseases in children were particularly identified.

Results. When assessing the local manifestations of "acute scrotal syndrome" in general, the following data were obtained. In 29 patients with organ twisted hydatids, we noted a heterogeneity of local changes and clinical manifestations of the disease. Children sought medical attention on the 1st-4th day after the onset of the disease.

When analyzing the age of patients with twisted hydatids, certain patterns were identified. Thus, it was most common (38,1%) in boys aged 10-11 years (average age 9,7 years, peak morbidity at 11 years). The proportion of patients in the early age group (0-3 years) was low, amounting to 4,0%. The proportion of patients in the older age group increased, reaching 64,7% in patients aged 10-14.

Of these, 8 (27,6%) patients who arrived within 24 hours from the onset of the disease experienced mild pain in the upper pole of the testis, described as "pain when touched or moved." Visually, these patients showed insignificant swelling and mild hyperemia of the affected genital area.

In 7 (24,1%) boys admitted to the hospital on the 2nd day, it was possible to identify a dark, painful, round, or oval formation (the "dark spot" symptom) penetrating through the skin. 21 (72,4%) patients were hospitalized on urgent indications after the onset of the disease, 48 hours later.In addition to pain in the scrotum, these patients had swelling of the seminal part of the scrotum and hyperemia.

During local examination, by palpatory-striped stimulation of the skin of the inner surface of the thigh 7-8 cm below the inguinal region in the upward direction, a cremaster reflex - the contraction of the muscle that lifts the testis on the same side - was determined. In 9 (31%) children admitted to the hospital within the first day, the cremasteric reflex was positive. Due to the development of swelling on the affected side of the scrotum, the remaining 20 (69%) patients could not visualize the cremasteric reflex.

The clinical picture of testicular torsion in all patients (41 boys) was distinguished by a pronounced pain syndrome and a disorder of general condition. The time from the onset of the illness until admission to the reception department of the RSCEMC's Samarkand branch ranged from 1 hour to 9 days.

The largest number of patients were patients aged 10-14 years - 74.5% with intravaginal forms of testicular torsion. This category was characterized by an extravaginal form (extravaginal twist), in which the testicle twists together with its vaginal membrane above the attachment of the parietal layer of the vaginal membrane. In boys aged 4-10 years, testicular torsion occurred relatively rarely (10.9%) and developed only against the background of an existing disorder of the testicular position - cryptorchidism. The clinical picture in patients with testicular torsion was characterized by pronounced pain, hyperemia, and swelling in the inguinal region.

The majority of patients - 34.9% - were admitted within the first 8 hours of the illness. Within the first 24 hours, the majority (65.1%) of all patients sought help. However, according to the results of our study, a high proportion (29.2%) of patients with a disease duration of more than a day remained. Six patients who received inpatient treatment 3 days after the onset of the disease attracted attention. Analysis of the causes of patients' late admission revealed important factors such as parents' late admission to medical care, attempts to self-medicate, shyness in adolescent boys, and the lack of awareness among primary care physicians about the danger of testicular torsion.

The cremasteric reflex was negative in all patients with testicular torsion. Prene's symptom (external inguinal ring tension of the testis in combination with increased pain when the gonad is lifted with the fingers), in direct contrast to the cremasteric reflex, was pronounced in all children with testicular torsion.

Discussion.The diagnostic value of the local status was examined separately for patients with organ twisting and testicular twisting (Table 1).

Table 1

General characteristics of the local status of patients with acute testicular diseases

Local status characteristic	Morgan's hydatids torsion Testicular torsion	Testicular torsion
Pain when touched or moved	29 (100%)	41 (100%)
Pain at site of typical hydatid localization (upper pole of testis)	8 (27,6%)	-
Dark point symptom	7(24,1%)	-
Seminal edema and hyperemia of the scrotum	21 (72,4%)	41 (100%)
Cremaster reflex	9 (31%)	
Prene's symptom	21 (72,4%)	41 (100%)

As can be seen from the table above, pain during touching or movement during the twisting of the hydatids and testis had a sensitivity and specificity of 100%. Upon early admission, in children with hydatid torsion, pain on palpation in the area of the epididymis and the symptom of palpable formation in the upper pole of the testis were detected in 27.6%. The "dark spot" symptom in boys with testicular torsion was negative, and only in 24.1% of patients with testicular torsion was positive. Clinical signs of determining the cremasteric reflex were detected only in 31% of children with testicular torsion. Symptom Prenespecific and sensitive was found in 100% of patients with testicular torsion, 72.4% of children with testicular torsion due to swelling and hyperemia were identified in this category.

Local changes on the affected side of the scrotum are sufficiently specific for diagnosing testicular torsion, such as swelling, testicular pain, abnormal testicular position, and absence of the cremasteric reflex.

Conclusion. Early diagnosis of reproductive organ diseases in boys is a guarantee of successful preservation of reproductive function in men. The analysis of the clinical picture conducted in the study revealed the possibility of expanding the list of anamnestic and clinical symptoms and including them in the existing list of supporting signs, which, with a high probability, will help to increase the diagnostic value of the system. Therefore, when applying to doctors with suspected testicular torsion and its appendages for

verification of the diagnosis, it is required to deliver the child to the children's surgical hospital in the shortest possible time (hours). If symptoms such as acute onset or severe pain, high position of the testis, or sharp pain on palpation are present, absolute indications are required.

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