

The Structure of the Pathology of the Genitourinary System in Children Who Received Inpatient Care in the Department of Surgery and Combined Trauma of Childhood of the Samarkand Branch of the Republican Scientific Center for Emergency Medical Care

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Abstract Introduction. The current standards of medical care provided to children with emergency genitourinary pathology do not meet the demands and correspondingly to the morbidity level in the population. **Purpose of the research.** The objective of this study is to provide a statistical and medical profile of emergency genitourinary pathology in hospitalized children. **Material and methods.** A retrospective analysis of clinical and statistical data for 11313 children admitted to the Department of Surgery and Combined Childhood Trauma of the Samarkand branch of the Republican Scientific Center for Emergency Medical Care between 2016 and 2022. **Results.** Of the total number of children, 11.96% (n=1353) were admitted due to genitourinary pathology, comprising 66% (n=892) boys and 34% (n=461) girls. The study revealed that urinary system diseases were diagnosed in 426 children (31.5%), whereas genital diseases were identified in 927 patients (68.5%). **Conclusions.** The findings of this study reveal a high frequency of emergency genitourinary pathology in children. The comprehensive clinical and statistical study underscores the importance of optimizing medical care for children with such conditions.

Keywords Children, Emergency pathology, Genitourinary system, Structure

1. Introduction

The development of diagnostic criteria and treatment tactics for emergency conditions of the genitourinary system in children, based on the integrated use of urological examination methods, is currently relevant [3].

With the adoption of state guarantees for the provision of free emergency medical care to citizens of the Republic of Uzbekistan, the need to improve the efficiency of the use of available health resources and achieve a balanced volume of inpatient medical care has become increasingly important [1].

The concept of the development of healthcare and medical science involves restructuring the lack network, expanding

outpatient medical care, replacing inpatient technologies, and providing medical care to the population. This approach makes it possible to maintain the necessary volume of medical services and improve their quality by utilizing local resources and untapped reserves, especially under the existing unstable socio-economic conditions [2].

To rationally organize medical care and utilize economic resources, it is advisable to use as much information as possible to comprehensively analyze morbidity [4]. Modern national clinical recommendations for improving the criteria for the quality of medical care and medical and economic standards should be based solely on domestic research data [5].

As a first step in the development of methods for assessing and improving the quality of medical care for the younger generation, it is necessary to determine the evidence-based measures aimed at optimizing medical care for children with emergency pathology of the genitourinary system.

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Received: Apr. 14, 2023; Accepted: Apr. 26, 2023; Published: May 12, 2023

Published online at <http://journal.sapub.org/ajmms>

2. Purpose of the Research

To characterize the emergency pathology of the genitourinary system in children according to clinical and statistical data in a hospital setting.

3. Material and Methods

Retrospective analysis was conducted on clinical and statistical data of 11,313 children who were hospitalized in the Department of Surgery and Combined Childhood Trauma at the Samarkand branch of the Republican Scientific Center for Emergency Medical Care between 2016 and 2022.

The study was multi-staged, and the program and methodology used are presented in the diagram.

Table 1. Research program and methodology

Stages	The content of the work	Objects of observation and research methods	Sources of information and scope of observation
I	Study of the level and structure of morbidity of emergency pathology of the genitourinary system in children	Patients of the Department of Surgery and combined trauma of childhood	Official data of the annual reports of the head of the department 2017-2021
II	Clinical and statistical characteristics of diseases of the genitourinary system, which caused the emergency hospitalization of children in the hospital, during 5 years	Patients of the Department of Surgery and combined trauma of childhood	Official data of the annual reports of the head of the department 2017-2021

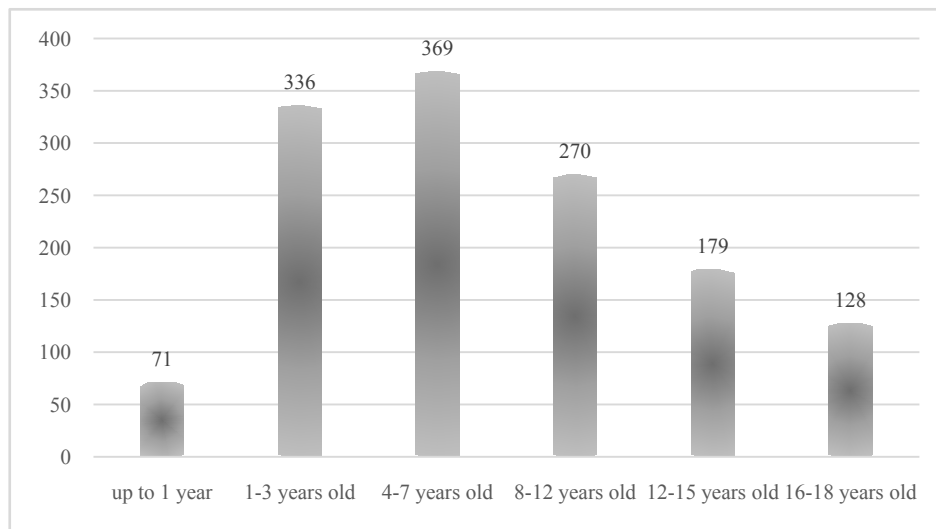


Figure 1. Distribution of children with emergency pathology of the genitourinary system

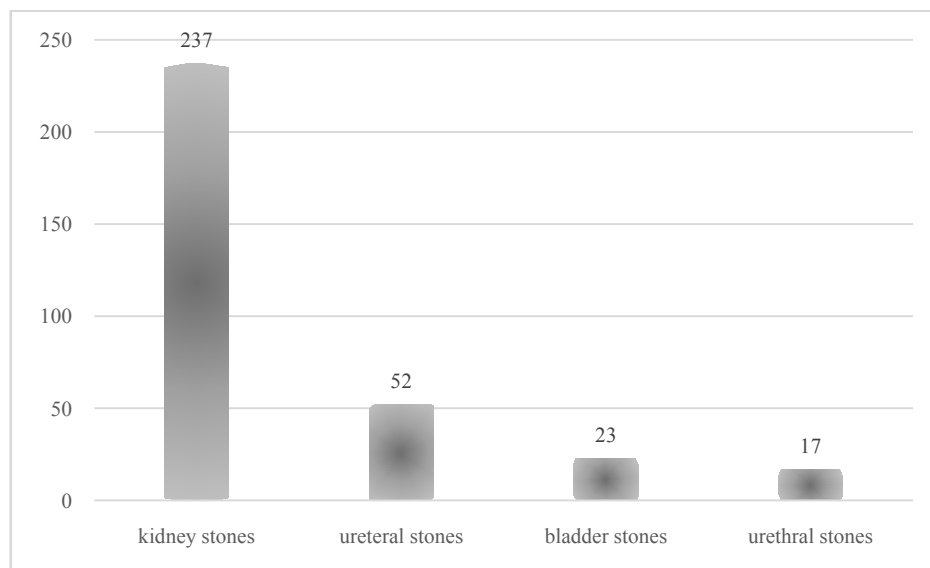


Figure 2. Types of urolithiasis in children

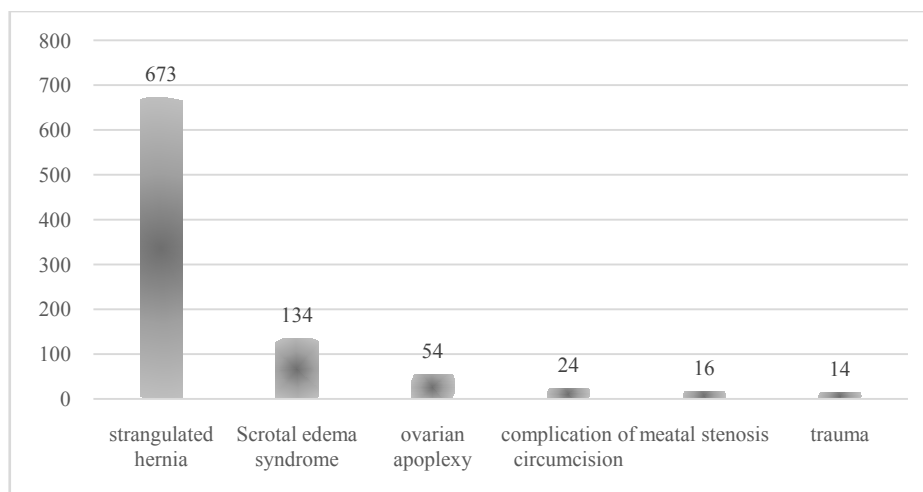


Figure 3. Structure of emergency pathology of the genitals in children

In the first stage of the study, the incidence of emergency pathology of the genitourinary organs in hospitalized children was analyzed using official data from the annual reports of the head of the department. In the second stage, clinical and laboratory studies were analyzed to establish the clinical and statistical characteristics of genitourinary diseases in children who were emergency hospitalized.

4. Results

According to the statistical data register of the annual reports of the head of the Department of Surgery and Combined Trauma of Childhood at the Samarkand branch of the Republican Scientific Center for Emergency Medical Care from 2016 to 2022, out of 11,313 children who received inpatient treatment, 1,353 children (11.96%) were hospitalized with pathology of the genitourinary system. Of these, 892 were boys (66%) and 461 were girls (34%).

The distribution of children by age showed that the largest number of children who were hospitalized were preschoolers (369 children) and those aged 1 to 3 years (336 children), which accounted for a total of 52.1%.

As shown in Figure 1, the next most frequent cases were children aged 8 to 12 years (270 children), accounting for 19.9% of cases. Older children (179 children) and adolescents (128 children) took third place in the frequency of hospitalization, with 22.8% of the total number of patients being between the ages of 12 and 18. The least hospitalized were children under 1 year old (71 children), representing 5.2% of cases.

The study found that diseases of the urinary system accounted for 31.5% of all hospitalized cases, with diseases of the genitals being noted in 68.5% of cases (927 patients).

The analysis of nosological forms of emergency urological diseases revealed that urolithiasis was the most common condition among children, accounting for 359 cases. Among these cases, kidney stones were detected in 237 children, stones in the ureters in 52, bladder concretions were diagnosed in 23 patients, and urethral stones were found in

17 patients (see Figure 2).

There were 46 patients hospitalized with complaints of acute urinary retention caused by "acute cystitis". 27 children with kidney injuries required emergency medical care in a hospital. The department also received 12 children with renal colic, 10 patients with congenital obstructive uropathies, and 2 children with "Acute purulent paranephritis".

Out of 927 children with urgent diseases of the reproductive system, patients with pinched inguinal hernias were in first place in terms of the frequency of hospitalization – 673 children. In second place were 134 boys hospitalized with a diagnosis of "Edematous scrotum syndrome". The next most frequent were girls with "Ovarian Apoplexy" - 54 patients.

24 children, in the structure of diseases, were hospitalized with a complication in the form of bleeding after the operation "Circumcizio". 16 patients were hospitalized with acute urinary retention, caused by "Meatostenosis". A small number of children, 14 patients (Figure 3), had trauma to the external genitalia.

5. Conclusions

Thus, we have identified a high frequency of urgent diseases of the genital and urinary organs in children, which requires justification of modern, low-cost approaches to the organization of medical care, methods of treatment, and rehabilitation of this category of patients. The conducted comprehensive clinical and statistical study substantiates the need to optimize medical care for children with emergency pathology of the genitourinary system. The formation of a clear understanding of the frequency and structure of emergency diseases of the urinary and reproductive organs is a qualitatively new stage for medical care based on the principles of resource conservation and maximum satisfaction of the needs for specialized surgical care of the children's population.

For practical medicine, it is important to cooperate with various specialists who, in the process of working with the

pathology of the genitourinary system in children requiring urgent medical care, can provide valuable insights. Especially important is the interaction between pediatric surgeons and pediatricians.

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