ЭПИДЕМИОЛОГИЯ ВНУТРИБОЛЬНИЧНЫХ ИНФЕКЦИЙ В ДЕТСКОЙ ХИРУРГИИ

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Аннотация: Нозокомиальная (внутрибольничная, госпитальная, ятрогенная) инфекция — заболевание, встречающееся в медицинских учреждениях и являющееся важнейшей проблемой современной медицины. Они вредят здоровью пациентов и требуют дополнительных финансовых затрат. В Республике Узбекистан интенсивные показатели заболеваемости инфекция в области хирургического вмешательства (ИОХВ) у детей практически не изменились в 2011-2019 годах, а в 2020 году самый низкий показатель составил 0,04. В Ферганской области эти показатели распределены неравномерно, где самый высокий показатель ИОХВ среди детей до 14 лет составил 1,2 в 2012 году, а самый низкий – 0,1 в 2020 году. Основные факторы возникновения внутрибольничных инфекций в области детской хирургии: слабый иммунитет у детей, неэффективность предоперационной антибиотикопрофилактики, длительное пребывание больных в стационаре, различные оперативные манипуляции, сочетание других заболеваний (наследственных и генетических).
Ключевые слова: *Нозокомиальная инфекция, инфекция операционного поля, эпидемиология, этиология, фактор риска, ретроспективный эпидемиологический анализ, профилактика.*

BOLALAR XIRURGIYASIDA UCHRAYDIGAN NOZOKOMIAL INFEKTSIYALAR EPIDEMIOLOGIYASI

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Annotatsiya: Kasalxona ichi (nozokomial, gospital, yatrogen) infektsiya - tibbiyot muassasalarida uchraydigan kasallik, zamonaviy tibbiyotning eng muhim muammosi hisoblanadi. Ular bemorlarning sog‘lig‘iga zarar yetkazadi, qo‘shimcha moddiy xarajatlarni talab qiladi. O‘zbekiston Respublikasida bolalarda xirurgiya sohasi infektsiyasi (XSI) bilan kasallanish holatining intensiv ko‘rsatkichlari 2011-2019-yillarda deyarli o‘zgarishsiz, 2020-yilda eng kam ko‘rsatkichni 0,04 tashkil etdi. Farg‘ona viloyatida bu ko‘rsatkichlar notekis taqsimlangan, bunda 14 yoshgacha bo‘lgan bolalarda XSIning eng yuqori ko‘rsatkichi 2012-yilda 1,2 ni, eng past holat 2020-yilda 0,1 ni tashkil etdi. Bolalar xirurgoya sohasi nozokomial infektsiyalarning paydo bo‘lishining asosiy omillari: bolalardagi zaif immunitet, operatsiyadan oldingi antibiotik profilaktikaning samarasizligi, bemorlarning kasalxonada uzoq muddat qolishi, turli xil operatsion manipulyatsiyalar, boshqa kasalliklar birga kelishi (irsiy va genetik).
Kalit so‘zlar: *Nozokomial infektsiya, xirurgiya sohasi infektsiyasi, epidemiologiya, etiologiya, xavf omili, retrospektiv epidemiologik tahlil, profilaktika. .*

EPIDEMIOLOGY OF NOSOCOMIAL INFECTIONS IN PEDIATRIC SURGERY

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Annotation: Intra-hospital (nosocomial, hospital, hydrogen) infection - a disease found in medical institutions, is the most important problem of modern medicine. They cause harm to the health of patients, thus causing additional costs. In the Republic of Uzbekistan, the intensive indicators of the incidence of children with SSI in 2011-2019 were almost unchanged, in 2020 the minimum was 0.04. In the Fergana region, these rates were unevenly distributed, with the highest incidence of SSI in children under 14 years of age being 1.2 in 2012 and the lowest being 0.1 in 2020. The field of pediatric surgery is the main factors for the appearance of nosocomial infections: weak immunity in children, inefficiency of preoperative antibiotic prophylaxis, long-term stay of patients in the hospital, various operational manipulations, and concomitant of other diseases (hereditary and genetic).
Keywords: *Nosocomial infection, infection of the field of surgery, epidemiology, etiology, risk factor, retrospective epidemiological analysis, prevention.*

Introduction. Nosocomial infections (NI) (Latin "nosocomium" - hospital and Greek "nosocomeo" - patient care) refers to any clinically identifiable disease that develops when a patient contacts or is present in a hospital for medical care, as well as any infectious disease that develops in a hospital employee as a result of working in that institution[1]. NI occurs in 1 out of 10 patients admitted to the hospital. Every year this leads to the death of 5,000 people [8]. Nosocomial infections are an important factor in morbidity and mortality. They lead to longer hospital stays and additional treatment costs. In 90% of cases, nosocomial infections are caused by bacteria, less often by viruses, fungi or protozoa [2]. In addition to conditional pathogens, the causative agent of in-hospital infections are opportunistic microorganisms with relatively low pathogenicity, especially in patients with severe and concomitant diseases. Conditional pathogens with one in line, hospital inside of infections trigger relatively low pathogenicity have has been opportunistic microorganisms, especially heavy and together walker to diseases played in patients .

The most recent studies have shown that the etiological role of gram-positive cocci, including coagulase-positive and coagulase-negative staphylococci, streptococci and enterococci, has increased. The frequency of isolation of multi-drug resistant Staphylococcus aureus has increased significantly. At the same time, the frequency of infections caused by Escherichia coli and Klebsiella pneumoniae decreased from 23% to 16% and from 7% to 5%, respectively [1].

The development of SSI has multifactorial etiology. To date, a number of risk factors are known for SSI. The main "external" (exogenous) factors, the effects of which are confirmed in epidemiological studies, are: surgical approach, type of operation, duration of operation, number of operations performed at the same time, suturing the surgical area, drainage, blood transfusion, duration of hospital stay before surgery, etc. Of the "internal" (endogenous) factors associated with the patient himself, the following can be distinguished: the main pathology, additional diseases, age, body mass index (obesity), ASA index (the level of risk of general anesthesia). [3,5,6,11,13,15]. Among the most important causes that determine the occurrence of wound infection are 3 groups of factors: preoperative, peri-and intraoperative and postoperative[4] Among the main" external " risk factors for the development of SSI are the following:

- operative access (in chest operations, SSI develops 3 times more often than in abdominal operations). [10];

- traumatic processing of tissues (improper incision, tissue compression, tool damage of wound edges increases the risk of SSI) [7];

- poor homeostasis (about 30% of cases of SSI are associated with hematomas in the wound, which are a breeding ground for microorganisms). In addition, hematomas compress tissues and lead to the development of ischemia, an additional risk factor for SSI [14];

- excessive use of electrothermocoagulation (leading to tissue necrosis) [12].

Children, along with the elderly, are a risk group for the development of nosocomial infections. The incidence of nosocomial infections in children is inversely proportional to age. In newborns, in addition to the risk factors characteristic of adults, the immaturity of the protective mechanisms of humoral and cellular immunity causes the development of nosocomial infections. Nosocomial infections in Pediatrics have their own characteristics in relation to infections in adults. They are even heavier. Among the causative agents of children's infections, gram-positive microorganisms prevail, the main localization areas are the gastrointestinal tract, respiratory organs and blood flow. The SENIC epidemiological study showed that implementing infection control programs based on epidemiological monitoring data can prevent 32% of infections within the hospital [1].

According to international data, the proportion of SSI in adult patients is 15-25% of those listed, compared to 2.5 to 20% of gacha in the child population. There are no convincing statistics on the prevalence and number of surgical infections in Uzbekistan, but it can be safely said that all intra-hospital infections have a leading role in the structure of the field of surgery, and about 5-35 of every 100 patients who have undergone surgery can develop SSI.

The purpose of research: To study the epidemiology of intra-hospital infections found in pediatric surgery in the Republic of Uzbekistan and the Fergana region.

Research materials and methods: Statistical data of the Committee on Sanitary and Epidemiological Tranquility and Public Health of the Republic of Uzbekistan 2011-2021. Epidemiological and statistical method.

Results and discussions: To date, nosocomial infections still remain an acute insoluble problem around the world. In recent years, medicine has developed a lot, but despite this, nosocomial infections are still relevant. From 2011 to 2021, the hospital in children was recorded, analyzing the long-term dynamics of infection with internal infections. The incidence rate of children under the age of 14 in Uzbekistan from 2011 to 2019 was 6.1 per 100,000 inhabitants, and this indicator was 2.1 by 2020, increasing to 3.3 in 2021. Diagram 1 provides data on the rates of infestation with intra-hospital infections in the Republic of Uzbekistan for the last decade from 2011 to 2021. (in intensive accounting for 100 thousand inhabitants).

Diagram 1. Uzbekistan in the Republic during 2011-2021 hospital inside of infections (up to 14 years) are intensive indicators dynamics. (100 thousand to the population).

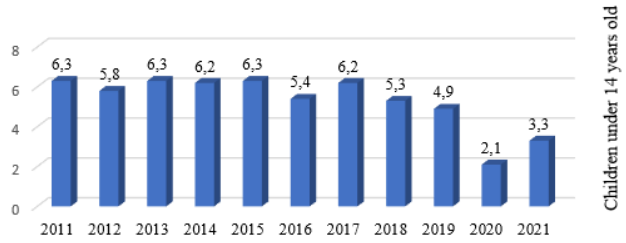
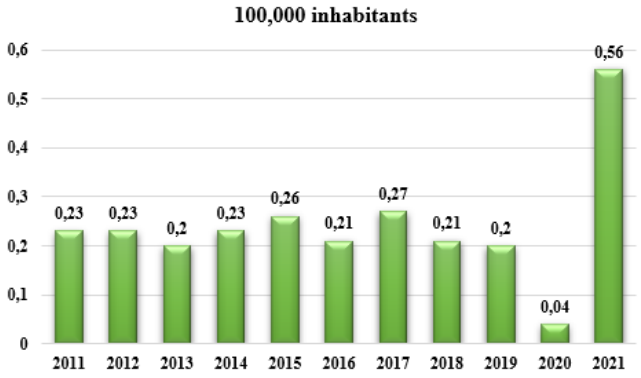


Diagram 2 records intensive indicators of the incidence of SSI in children under 14 years of age. In this case, from 2011 to 2019, almost unchanged was noted. We can see that the minimum figure in 2020 was 0.04.

Diagram 2. Uzbekistan Children in the republic in 2011-2021 surgery field (up to 14 years) is intensive in indicators hospital inside of infections with illness dynamics. (100 thousand to the population).



Children surgeon field nosocomial of infections appear to be main factors :

-in children weak immunity ;

-from surgery previous antibiotic of prevention ineffectiveness ;

-of patients in the hospital long lifetime stay

-various operational manipulations;

-another disease together coming (hereditary and genetic).

Low weight in children is also a factor in the development of nosocomial infections, and an increase in the frequency of nosocomial infections was noted in underweight children compared to overweight children. The main factors are the increase in the number of high-risk groups, including underweight children, and a decrease in the body's resistance due to adverse environmental conditions. This condition and the presence of risk factors during hospitalization cause a high rate of nosocomial infections in children. The frequency of SSI in children increases if the operation lasts for a long time and is carried out in an emergency. Also, a risk factor for the development of SSI is the presence of the mother of those who come to the hospital, mainly the parents, and the mother of the breastfed children during their stay in the hospital. Despite preventive measures in hospitals, the morbidity rate is still high.

However, the fact that the true number of nosocomial infections is often hidden has a negative impact on the system of measures aimed at preventing SSIs. In connection with the results of the analysis of the incidence of nosocomial infections in the field of surgery in children, we can say: nosocomial infections are an important health problem in a country with a high incidence rate, including the treatment and care of children with weak immunity and hereditary and genetic diseases. Nosocomial infections over epidemiological control more improvement important and is necessary . Children in our republic in 2011-2021 surgery field infections get sick status according to high indicators Fergana recorded in the province done. These are the indicators uneven distributed , in which up to 14 years was in children of SSI the most high indicator in 2012 with 1.2 observed if , the lowest level is 0.1 in 2020 organize did .

We are Fergana in 2011-2021 up to 14 years old in the valley was in children surgery field hospital inside of of infections comparative analysis we spent See diagram 4 possible : Andijan in the region the most high indicator observed is , in which 17.9 organize

made (avg abs. blind), suitable respectively Fergana 6.1 in the region (avg abs. blind) and Namangan 3.36 in the region (avg abs. blind) condition note done _ Intensive in indicators too Andijan in the region high indicator, Fergana and Namangan in the regions almost less difference with illness status observed.

Diagram 3. Fergana children in the region of 2011-2021 surgery field hospital inside of infections with illness dynamics intensive in indicators (per 100 million people).

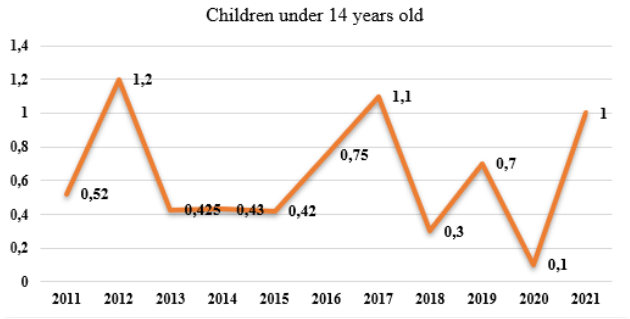
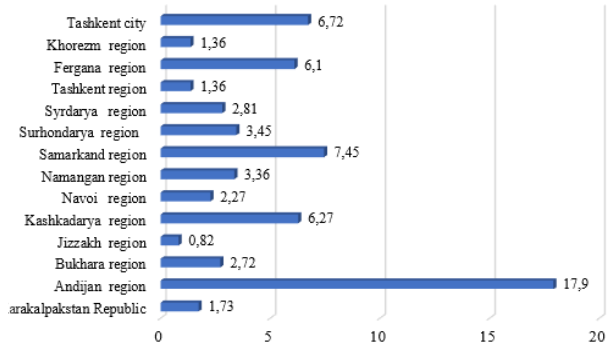
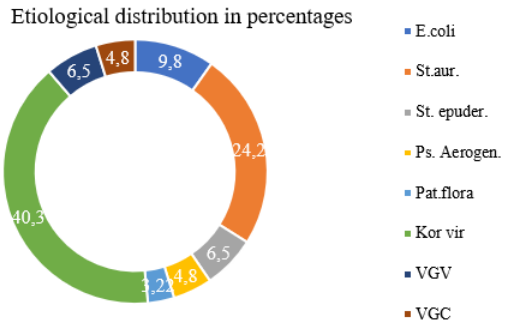


Diagram 4. Incidence rate of nosocomial infections in children under 14 years of age in the administrative regions of the Republic of Uzbekistan during 2011-2021.



This the situation Andijan in the region population the number with density (abundance). can also be explained. That is illness status another to the regions than more to meet probability high.

Diagram 5 . Fergana 2011-2021 hospital in the region inside of of infections etiological distribution (in percentages).



Fergana region 2011-2021 hospital is a factor in the incidence of internal infections in the first place 40.3 % - coronavirus infection, in the second place 24.2 % - St. Petersburg.aureus, followed by E.coli, viral hepatitis B and C infections are standing. (Diagram 5). St. Louisaureus has been confirmed to be an etiological factor in the highest percentage of nosocomial infections not only in the Fergana region, but worldwide. St. Louisthe presence of Aureus disinfectants, antibiotic-resistant hospital strains is one of the problems of the entire world's health system. According to the results of the research carried out, the transmission routes of intra – hospital infections in children are: persons infected with the causative agent outside the hospital parents, employees, nobiological subjects, infected patients, carriers of the disease. Work on the Prevention of hospital SSI includes two-way activities:

- reduce the risk of infection;
- reduce the risk of disease in cases of infection

The direction of the first measures is ensured by the correct Organization of the sanitary and hygienic regime of hospitals regulated by orders and methodological guidelines issued by the SSV of Uzbekistan. The direction of the second measures is ensured by timely laboratory identification of immunodeficiency and adequate correction of them. Preventive use of special bacteriophages, gamma-globulins, immune serums and toxoids, rational use of antibiotics also give tangible results.

Prevention of SSI in children consists of the following set of preventive and anti-epidemic measures:

- raising children's immunity;
- limit the number and time of visitors to the hospital (parents, close relatives);
- reducing the duration of hospital stay before surgery;
- rational use of antibacterial drugs;
- full compliance with the rules of antiseptics in the process of operation (personnel and equipment);
- carry out constant supervision with the patient's condition after surgery;
- premature ejaculation(for 5-7 days);
- timely transfer to specialized departments, hospitals in the registration of pathological conditions;

Conclusion. In order to carry out measures aimed at neutralizing the sources of hospital infections,

must be isolated. It is recommended to carry out a microbiological examination of patients hospitalized after the admission of children to surgical departments. Important preventive measures include maintaining cleanliness in a medical institution and thoroughly sterilizing asepsis rules, medical devices during invasive procedures. Special attention is paid to washing and rubbing hands with alcohol solutions before and after contact with the patient. Thus, nosocomial infections remain a serious threat to the health and life of patients, especially those with risk factors. In order to reduce the incidence and mortality of infestations within the hospital, it is necessary to control infection and improve patient care, improve diagnostic methods and introduce new antimicrobial agents into clinical practice.

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