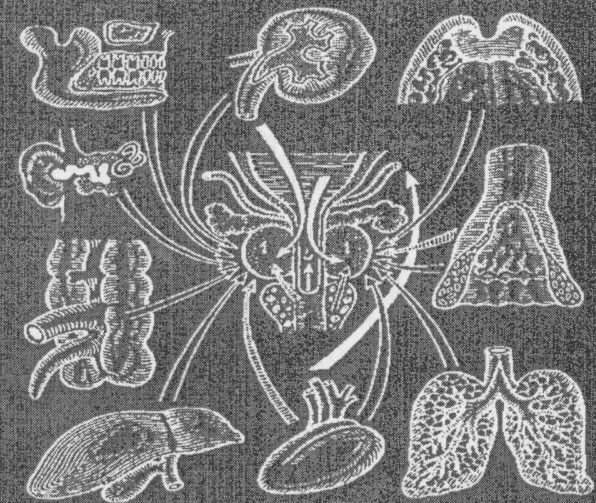


**ІНФЕКЦІЇ І ПАРАЗИТАРНІ
ХВОРОБИ В ПРАКТИЦІ КЛІНІЦИСТА:
СУЧАСНИЙ СТАН ДІАГНОСТИКИ,
ЛІКУВАННЯ ТА ЇХ ЗАПОБІГАННЯ**

*Матеріали
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with the success of antibiotics therapy an emergence of new aggressive and resistant strains is observed. Therefore, in present conditions the search of new antimicrobial compounds is continuously being carried out and new approaches and means of direct antibiotic substances synthesis are being developed.

The aim of our work was to compare the spectrum and level of antimicrobial activity of different groups of 7-azacumarine derivatives.

Material and methods. The object of research was 54 synthetic derivatives of 7-azacumarines, that were synthesized at the organic chemistry subdepartment of in Kharkov. The studied compounds were divided according to their chemical composition in 5 groups: 1 group - 5-hydroxymethyl-2-imino-8-methyl-2H-pyrano [2,3-c]pyridine-3-N-arycarboxamides, 2 group - 2-N2-arylimino-5-hydroxymethyl-8-methyl-2H-pyran [2,3-c]pyridine-3-N1-arycarboxamides, 3 group - 2-N-arylimino-5-hydroxymethyl-8-methyl-2H-pyrano[3,2-c]pyridine-3-carboxamides, 4 group - 5-hydroxymethyl-8-methyl-2-oxo-2H-pyrano[2,3-c]pyridine-3-N-arycarboxamides, 5 group - 2-N2-arylimino-3-N1-arycarboxamido-8-methyl-2H-pyrano[3,2-c]pyridine-5-il)-methylacetates. The compounds were given individual codes depending on the radical they contained. In order to study the antimicrobial activity of 7-azacumarines derivatives 41 museum and clinical reference strains, that were obtained from the branch of Museum of microorganism of SI "Mechnikov Institute of AMS of Ukraine" were tested. The microbial load of museum strains was 106 ra 107 CFU/ml. The determination of antimicrobial activity of the studied compounds was carried out with the help of serial dilutions method in liquid mediums. During the experiments 24-hour cultures were used, that were grown on the respective mediums, listed in SF of Ukraine. All experiments were carried out in 5 reruns.

Results and discussion. The study of antimicrobial activity on the widened range of museum and clinical strains has established that 7-azacumarine derivatives have shown sufficiently high bacteriostatic activity towards *E.coli* ATCC 25922, *P.aeruginosa* ATCC 27853, *B.anthracooides* ATCC 1312, *S.pneumoniae* ATCC 49619, *B.cereus* ATCC 10702 (MBstC and MBcC in the range of 25,0 - 50,0 µg/ml). The compounds having the higher anti-*Staphylococcus* activity belonged to the groups 2 and 3 (the range of MBstC and MBcC was 12,5 - 25,0 µg/ml). The study of *R.aquatilis* sensitivity has shown that this organism was most sensitive to almost all compounds of the groups 1 and 5 (MBstC was 12,5 - 25,0 µg/ml). The compounds of the 1 experimental group had the widest bacteriostatic effect among all the studied groups. Half of the compounds of these groups сполуч цієї групи проявляла бактеріостатичний ефект щодо *S.pneumoniae* ATCC 49619, *E.coli* ATCC 25922, *P.aeruginosa* ATCC 27853, *B.anthracooides* ATCC 1312, *B.cereus* ATCC 10702, *S.flexneri* ГІСК 170, *S.sonnei* ГІСК 5772, *S.enteritidis*, rp. P, Y/ ratin № 27 and *K.pneumoniae* K-7 NCTC 9127 in concentrations 25,0 - 50,0 µg/ml. While studying the antifungal activity of 7-azacumarines it was established that 95 % of compounds have displayed high fungistatic activity. The maximal fungistatic activity was displayed by compounds of groups 1 and 3.

Conclusion. The microbiological studies testify that separate groups of 7-azacumarines derivatives have a wide range and high level of antimicrobial activity, that proves that they are promising in terms of effective antimicrobial agents development.

ANTIBIOTICS, ENTEROPATHOGENIC E. COLI AND MICROFLORA OF INTESTINE OF CHILDREN

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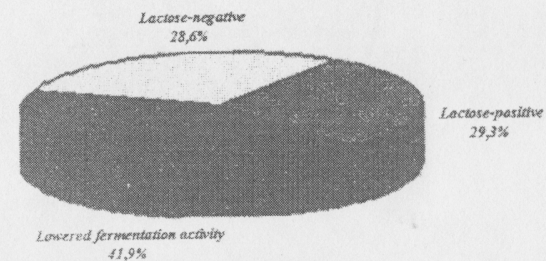
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Change of qualitative and quantitative structure contents of the microflora of intestines under influence Enteropathogenic *E. coli* (EPEC) and antibiotic therapy on 98 children Sumy in the age 2 months till 8 years is investigated. The contents of microflora in excrements were investigated according to methodical recommendations "Laboratory diagnostics of dysbacterioses".

Such statistically authentic changes autochthonous microflora of intestines at children. Have been revealed: *Bifidobacterium* spp. at all surveyed children their amount changed within the limits

of 105-107 CFO/g feces, that considerably below norm. 55.1% of children the contents *Bifidobacteria* has made 106 CFO / g feces and only 22.4% of patients their amount reached some 107 CFO / g feces. Decrease in the contents of *Lactobacteria* up to a parameter of 103-106 CFO / g feces is revealed also. 46.9% of children the amount *Lactobacteria* has made 103 CFO / g feces and 34.7% of children their contents reached some 105 CFO / g feces. The contents *Bacteriodes* at all patients has been lowered, did not exceed a parameter of 106 CFO / g feces.

Significant changes have been revealed in qualitative and quantitative structure of contents *E. coli*.



At 72.2% of patients dysbiotic changes were characterized by total high-grade decrease in fermentation attitude of *E. coli*. Its contents were less than 106 CFO / g feces. 28.6% of patients are revealed lactose negative serotypes *Escherichia* and 41.9% of patients - serotype *E. coli* with lowered fermentation activity. The quantity of lactose negative *E. coli* has made 107 CFO / g feces, and the contents *E. coli* with lowered fermentation activity made 105

CFO / g feces. Of all serotypes of *E. coli* 68% serotype showed lytic and hemolytic effect on donor specific bacteriophage MS2. It is found out, that *Bifidobacteria* and *Lactobacteria* deficiency was connected with 100% hemolytic activity of *E. coli*. The contents of conditional-pathogenic bacteria have been raised and also bacteria formed associations.

Analyzing the received results, it is possible to approve powerful influences of EPEC and antibiotic therapy on qualitative and the quantitative structural contents of children intestinal microflora.

INCIDENCE ON ASCARIASIS IN THE SUMY REGION IN 2000-2009 YEARS

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Changing social-economic situation in Ukraine, the migration processes in the past 10 years have affected the health of the population, the nature of supply and sanitary living conditions. In turn, these changes could have an impact on the level of helminthic invasion of children and adults.

The aim of this study was the analysis of the incidence of the population of Sumy region on ascariasis for 2000-2009 years.

A study of morbidity ascariasis according to accounting reports of urban and regional sanitary-epidemiological stations for the 2000-2009 years. Among the registered cases in the rural population constituted 40,7 - 44,6%. In the dynamics of the maximum number identifying ascariasis was in 2001 (1435 cases) in 2002 began reducing morbidity (1349), which reached a minimum (862) in 2009.

Proportion of children up to 14 years in relation to the adult population in different years varied from 50,1% to 70,6%. Among rural residents, this indicator ranged from 50,1 - 77,3%. The dynamics for 10 years, a tendency to reduce child morbidity with lift in 2008 (564 persons)

compared with 2007 (519 people). In the study of age-grading of the child population for the entire analyzed period revealed the prevalence of children aged 7 to 14 years inclusive among the registered cases. In the group of 0 to 2 years including a minimum level of cases of ascariasis was in 2005-2006 (53), the maximum - in 2002 (106). Among children aged 3 to 6 years the minimum number of cases was in 2009 (143), and the maximum - in 2000 (317). Among children aged 7 to 14 years, in 2009 fixed the minimum number of identified ascariasis - 241 cases, the maximum observed in 2000 (586).

In Sumy in the past 10 years, the maximum number of ascariasis was identified in 2001 (61 cases), minimal - in 2009 (21). About half were children under 14 years inclusive. In 2007, children accounted for 52% of children from 0 to 2 years in the period from 2001 to 2006 and in 2009 the number of reported cases of ascariasis among children 0-2 years and 3-6 years was the same. Among children aged 7-14 years, an increase in reported cases of ascariasis in 2002, retaining a high level until 2005 (12 and 18, respectively), declining from 2006 (3). In 2009, registered 2 cases of ascariasis in this group.

Based on this analysis it is possible to conclude the feasibility study of different age groups on ascariasis, routine deworming in children, improving health and preventive work among the population, especially in rural areas.

HAEMOPHILUS INFLUENZA INFECTION AT CHILDREN OF UZBEKISTAN: DIAGNOSIS, TREATMENT AND VACCINATION

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Introduction. The Haemophilus influenza infection represents a serious problem for health of children. A wide circulation in children's population and gravity of the forecast (the pneumonia still remains to one of the reasons of infantile death rate) define an urgency of the given problem and working out and introduction in practice of effective methods of preventive maintenance and treatment demand.

The purpose: studying of frequency, features of a clinical current of the most widespread forms Haemophilus influenza infections in Uzbekistan, and also working out of methods of early diagnostics, treatment and preventive maintenance Haemophilus influenza infections in Uzbekistan.

Materials. Investigated 314 children at the age from 1 month till 17 years which were hospitalised in several clinics of Tashkent city.

Methods. For diagnosis were used serologic, bacteriologic and PCR-method.

Results of researches. Results of research have shown that frequency of revealing Haemophilus influenza type b at patient with purulent meningitis makes 9%. Diagnostic criteria of Haemophilus influenza meningitis are revealed. Frequency of a pneumonia of a Hib-aetiology which has made 35% is established. Seroepidemiological research of level of antibodies to Hib at children has revealed distinctions in levels of antibodies depending on age. On level of specific immunity to Hib indications to immunization of the most vulnerable groups of children are proved.

Conclusions. Results of serologic researches have shown that the most vulnerable concerning a Hib-infection are children of 1 year of a life. It causes high frequency of a pneumonia and meningitis Hib aetiology at children of early age in region. High frequency Hib of a pneumonia revealed by us specifies in necessity of introduction of vaccination against Hib-infection in a calendar of vaccination. Revealed by us high frequency of Hib infection promoted introduction of vaccination against Hib in the calendar of vaccination. Introduction of vaccination against Hib will allow to lower considerably frequency of a heavy pneumonia, and it, in turn, will lower indicators of disease and death rate of children from a pneumonia in region.

СПОСОБ ДЕТОКСИКАЦИОННОЙ ТЕРАПИИ ПРИ ПЕРИТОНИТЕ

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Сохраняющаяся высокая частота осложнений и неудовлетворенность результатами лечения, несмотря на достигнутые успехи обуславливает разработку новых исследований в проблеме лечения острых разлитых перитонитов. Возникновение и распространение лекарственноустойчивых форм микроорганизмов обуславливает необходимость в изыскании новых средств и методов терапии. В последние годы внимание клиницистов - исследователей привлекают вещества с высоким окислительным потенциалом, в частности - озон. На лечении находились 126 больных с разлитым перитонитом в возрасте от 15 до 76 лет. Перитонит как осложнение острого аппендицита развился - у 86 (68,3%), острого холецистита - у 5 (3,9%), прободной язвы желудка и двенадцатиперстной кишки - у 17 (13,5%), острой кишечной непроходимости - у 11 (8,7%), острого панкреатита - у 4 (3,2%), ущемленной грыжи - у 3 (2,4%) больных.

Объем детоксикационной терапии определялся с учетом показателей иммунограммы, крови, распространенностью и стадией перитонита, явлений токсической делирии.

Оперативное пособие заключалось в устранении причины перитонита, тщательного промывания брюшной полости озонированным раствором фурациллина на гипертонической солевой основе (смесь 1:5000 раствора фурациллина и 10% раствора хлорида натрия в соотношении 2:1) и дренировании ее, а также мероприятиях направленных на нормализацию гематических и метаболических показателей. Антибиотики вводили лимфотропно.

Отмечено улучшение общего состояния больных: урежение пульса, стабилизация АД, уменьшение частоты дыхания, снижение интоксикации, увеличение процента лимфоцитов и улучшение показателей гомеостаза.

Результаты исследования свидетельствуют о том, что промывание брюшной полости озонированным раствором фурациллина на гипертонической солевой основе способствует снижению обсемененности микрофлоры брюшной полости, которая быстрее освобождается от гноеродной микрофлоры, что играет немаловажную роль в течении перитонитов, усиливает детоксикационный эффект.

Предлагаемый способ лечения отличается простотой и доступностью, практически не дает побочных реакции и рекомендуется для широкого применения в хирургической практике.

ФЕНОТИПЫ РЕЗИСТЕНТНОСТИ К АНТИБАКТЕРИАЛЬНЫМ ПРЕПАРАТАМ САЛЬМОНЕЛЛ И ШИГЕЛЛ ВЫДЕЛЕННЫЕ ИЗ РАЗЛИЧНЫХ РЕГИОНОВ РЕСПУБЛИКИ УЗБЕКИСТАН

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Человек издавна существует в неизбежном окружении разнообразных микробов. Именно они были первыми формами жизни на Земле, пережив затем все последующие этапы биологической эволюции. Их быстрое приспособление к неблагоприятным условиям окружающей среды во многом объясняется огромной численностью, разнообразием и динамичностью популяций, высокими темпами размножения, скоростью передачи генетической информации и эффективностью селективного отбора.

Проблема антибиотикорезистентности возбудителей инфекционных заболеваний не только не исчезает со временем, но и возрастает.

Цель работы: оценка резистентности сальмонелл и шигелл к антибактериальным препаратам выделенные из различных регионов Республики Узбекистан.