BACTERIAL DYSENTERY DISEASE GENERAL DESCRIPTION, ETIOLOGY, EPIDEMIOLOGY, PREVENTION AND MEASURES AGAINST EPIDEMICS

Mizrobov Doston Oktamovich
mizrobov.doston@bsmi.uz
Bukhara State Medical Institute

Abstract: Shigellosis (bacterial dysentery) is an anthroponotic infectious disease with a fecal-oral transmission mechanism. It is caused by bacteria of the genus Shigella, and occurs in acute and chronic forms. It is characterized by manifestations of general intoxication with fever and signs of inflammation of the gastrointestinal tract (mainly the distal colon in the form of spastic hemocolitis).

This article describes the general description of shigellosis, their etiology, epidemiology, diagnostic and treatment methods, as well as ways to improve preventive and anti-epidemic measures. The article analyzes the main trends in reducing the spread of infectious diseases based on world experience and modern approaches.

Keywords: Shigellosis, infectious diseases, etiology, epidemiology, prevention, anti-epidemic measures.

Content of the article.

Introduction: Shigellosis (bacterial dysentery) is an anthroponotic infectious disease with a fecal-oral transmission mechanism. It is caused by bacteria of the genus Shigella, and occurs in acute and chronic forms. It is characterized by manifestations of general intoxication with fever and signs of inflammation of the gastrointestinal tract (mainly the distal colon in the form of spastic hemocolitis).

Etiology: The causative agents of shigellosis are non-motile gram-negative bacteria of the genus Shigella of the family Enterobacteriaceae, which belong to facultative aerobes; they grow well on conventional nutrient media, forming S- and R-colonies.

All shigella grow well on differential diagnostic media. The temperature optimum is 37°C, shigella Sonne can reproduce at 10-15°C. Pathogens are distinguished by antigen structure, biochemical activity, pathogenicity and virulence.

Bacterial virulence is quite variable. It is quite high in Shigella flexneri, especially subserotype 2a, and is least expressed in Shigella sonnei. One of the most important indicators of bacterial virulence is invasive proteins, which determine the ability of pathogens to intracellular parasitism in colonocytes, enterocytes (to a lesser extent) and macrophages. The degree of biochemical activity of shigella is inversely proportional to their virulence. The deficiency of virulence in shigella sonnei is fully

compensated by their high enzymatic activity, unpretentiousness to the composition of nutrient media and the rate of reproduction in the infected substrate.

The mechanism of development of the epidemic process

The reservoir and source of infection is a person (patient with acute or chronic dysentery, a convalescent or transient carrier). The greatest danger is posed by patients with mild and latent forms of dysentery, especially those working in the food industry and persons equivalent to them.

Period of infectiousness. Shigella begin to be excreted from the human body at the first symptoms of the disease; the duration of excretion is 7-10 days and the period of reconvalescence (on average 2-3 weeks). Sometimes the excretion of bacteria is delayed for several weeks or months. The tendency to chronicity of the infectious process is most characteristic of Flexner's dysentery, and least characteristic of Sonne's dysentery.

The transmission mechanism is fecal-oral Transmission routes and factors: water, food and contact-household. In Grigoriev-Shiga dysentery, the main route of transmission is contact-household, which ensures the transmission of highly virulent pathogens. In Flexner's dysentery, the main route of transmission is water, in Sonne's dysentery - food. Sonne's Shigella have biological advantages over other types of Shigella. Inferior to them in virulence, they are more resistant in the external environment, under favorable conditions they can even multiply in milk and dairy products, which increases their danger. The incubation period for acute dysentery ranges from 1 to 7 days, averaging 2–3 days.

Preventive and epidemic control measures

The widespread occurrence of shigellosis, as well as other intestinal infections, is due to people living in unsanitary housing conditions, customs and prejudices that contradict basic sanitary standards, poor-quality water supply, poor nutrition against the background of an extremely low level of general and sanitary culture and medical care for the population.

For preventive purposes, clinical laboratory examinations and restrictive measures are carried out among certain groups of the population. A single laboratory examination is required for persons applicant for work in:

1) food production enterprises,public catering establishments and trade facilities selling food products, milk kitchens, dairy farms, dairy plants and others directly involved in the processing, storage, transportation of food products and delivery of prepared food, as well as the repair of inventory and equipment;

2) organizations for the education and training, recreation and health improvement of children and medical organizations involved in the direct service and nutrition of children;

3) organizations operating water supply structures, delivery and storage of drinking water.

Used literature

1. Т.А.Даминов Инфекционные болезни с детскими инфекциями// «Практика». — 2010. — С.370—377.
2. Афанасьева Н.А. Инфекционно—воспалительные заболевания полости рта и глотки // Российский медицинский журнал = Russian medical journal : Двухмес. науч.—практ. журн. — М. : Медицина, 2007. — № 5. — С.21—25.
3. Беляков В.Д., Брико Н.И. // Здоровье населения и среда обитания: Информационный бюллетень / Федеральный цент государственного санитарно— эпидемиологического надзора. М. : ВНиСО. Ежемес., 1994 — № 10 (19) — С.4—7.
4. Белякова И.В. OF-типирование при изучении эпидемического процесса стрептококковой инфекции // Журнал микробиологии эпидемиологии и иммунологии / Минздрав РФ. — М. : Медицина, 1993. — № 2. — С.48—49.
5. Келдиёрова З.Д. Состояние иммунной системы у детей с инфекционным мононуклеозом и обоснование иммунокорригируюшей терапии.// Central Asian Journal Of Medical and Natural Sciences. http://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/422/3972.
6. М.А. Атоева эпидемиология *(Учебник для студентов медицинских вузов)* 2022 183-187
7. Jumaeva A. A., Nurov S. HYGIENIC PRINCIPLES OF FEEDING CHILDREN AND ADOLESCENTS //Central Asian Academic Journal of Scientific Research. – 2022. – Т. 2. – №. 6. – С. 258-263.
8. Azim o’g’li N. S. Sanitary Protection of Water Bodies and The Process of Natural Cleaning in Water Bodies //AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI. – 2023. – Т. 2. – №. 10. – С. 83-85.
9. Azim o’g’li N. S. Cleaning of Open Water Bodies From Waste Water From Production Enterprises //SCIENTIFIC JOURNAL OF APPLIED AND MEDICAL SCIENCES. – 2023. – Т. 2. – №. 10. – С. 80-82.
10. Azim o’g’li N. S. Existing Problems in Providing the Population With Drinking Water Through Underground Water Sources //AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI. – 2023. – Т. 2. – №. 10. – С. 77-79.
11. O'G N. S. A. Z. et al. CHANGES IN TASTE AND FOOD INTAKE DURING THE MENSTRUAL CYCLE //Science and innovation. – 2022. – Т. 1. – №. D3. – С. 251-253.
12. Нуров С. А. ИНСОН ОРГАНИЗМИДАГИ СУВНИНГ ХУСУСИЯТЛАРИ ВА ЮҚОРИ КИМЁВИЙ ТАРКИБЛИ СУВ ТАЪСИРИНИНГ

ПАТОГЕНЕТИК ЖИҲАТЛАРИ //SCIENTIFIC JOURNAL OF APPLIED AND MEDICAL SCIENCES. – 2024. – Т. 3. – №. 6. – С. 121-123.
13. Azimovich N. S. Pathogenetic Aspects of the Effect of Water with a High Chemical Content //International Journal of Integrative and Modern Medicine. – 2024. – Т. 2. – №. 6. – С. 81-83.
14. Azimovich N. S. The Importance of Minerals for the Human Body //International Journal of Integrative and Modern Medicine. – 2024. – Т. 2. – №. 6. – С. 77-80.
15. Azimovich N. S. Correction of Morpho-Functional Changes in the Kidney Caused by Groundwater Consumption with Bioactive Additives //International Journal of Integrative and Modern Medicine. – 2024. – Т. 2. – №. 6. – С. 84-85.
16. Azimovich N. S. PATHOGENETIC ASPECTS OF THE PROPERTIES OF WATER IN THE HUMAN BODY AND THE EFFECT OF SOLID WATER //World Bulletin of Public Health. – 2024. – Т. 34. – С. 47-49.
17. Sarboz A’zim o’g N. et al. STRATEGIES AND APPROACHES TO REACH OUT-OF-SCHOOL CHILDREN AND ADOLESCENTS //EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE. – 2023. – Т. 3. – №. 3. – С. 56-58.
18. Sarboz A’zim o’g N. et al. Key Considerations for Assessing School Food Environments //AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI. – 2023. – Т. 2. – №. 3. – С. 85-87.
19. Azim o’g’li N. S. Sanitary Protection of Water Bodies and The Process of Natural Cleaning in Water Bodies //AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI. – 2023. – Т. 2. – №. 10. – С. 83-85.
20. Sarboz A’zim o’g N. et al. Disruption of Natural Systems Affects Health //AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI. – 2022. – С. 258-260.
21. Sarboz A’zim o’g N. et al. The Importance of Ecology for Children's Health and Well-Being //SCIENTIFIC JOURNAL OF APPLIED AND MEDICAL SCIENCES. – 2022. – С. 238-240.