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CLINICAL AND EPIDEMIOLOGICAL FEATURES OF THE MODERN COURSE OF SHIGELLOSIS IN ADULTS

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Annotatsiya (O‘zbek tilida)

Ushbu maqolada shigellyoz kasalligining zamonaviy klinik va epidemiologik xususiyatlari hamda uning bakterial ichak infeksiyalari tarkibidagi o‘rni tahlil qilindi. Tadqiqot natijalari kasallikning eng yuqori uchrashi 25–50 yoshdagi kattalar orasida kuzatilishini ko‘rsatdi. Kasallikning yoz–kuz mavsumida ko‘payishi saqlanib qolgan bo‘lsa-da, ilgari xos bo‘lgan aniq mavsumiylik kamaygan. Infeksiya yuqishida asosan oziq-ovqat mahsulotlari, ayniqsa sut mahsulotlari yetakchi o‘rin tutadi, suv omili ham muhim ahamiyatga ega. Etiologik

jihatdan *Shigella flexneri* ustunlik qiladi va ko‘pincha o‘rta va og‘ir kechish bilan namoyon bo‘ladi. Klinik jihatdan isitma, qorin og‘rig‘i va shilliq aralash kam hajmli najas bilan kechuvchi kolitik shakllar ustun bo‘lib, tenesmlar kam kuzatiladi. Tadqiqot natijalari diagnostika usullarini takomillashtirish va profilaktika choralarini kuchaytirish zarurligini ko‘rsatadi.

Kalit so‘zlar: shigellyoz, epidemiologiya, kattalar, ichak infeksiyalari, diagnostika, *Shigella flexneri*

Аннотация (Русский язык)

В данной статье рассмотрены современные клинико-эпидемиологические особенности шигеллеза и его место в структуре бактериальных кишечных инфекций. Установлено, что наибольшая заболеваемость наблюдается среди взрослых в возрасте 25–50 лет. Сохраняется сезонный рост заболеваемости в летне-осенний период, однако выраженная сезонность, характерная ранее, в настоящее время менее заметна. Ведущим путем передачи инфекции является пищевой, особенно через молочные продукты, при этом водный фактор также играет значительную роль. В этиологической структуре преобладает *Shigella flexneri*, ассоциированная преимущественно со среднетяжелыми и тяжелыми формами заболевания. Клинически заболевание чаще протекает в виде колитических форм с лихорадкой, болями в животе и скудным стулом со слизью, при редком наличии тенезмов. Полученные результаты подчеркивают необходимость совершенствования методов диагностики и усиления профилактических мероприятий.

Ключевые слова: шигеллез, эпидемиология, взрослые, кишечные инфекции, диагностика, *Shigella flexneri*

Abstract

Shigellosis remains an important cause of acute intestinal infections worldwide and continues to pose significant clinical and epidemiological challenges. This study aims to evaluate contemporary trends in the distribution, clinical presentation, and diagnostic features of shigellosis in adults. Particular attention is given to age-related incidence, seasonal patterns, transmission routes, and etiological agents. The analysis demonstrates that the highest morbidity is observed among individuals aged 25–50 years. Seasonal increases are noted during summer and autumn; however, the previously well-defined seasonal pattern has become less distinct. Foodborne transmission, especially through dairy products, plays a dominant role, while waterborne infection also contributes significantly. *Shigella flexneri* is identified as the predominant pathogen and is frequently associated with moderate to severe disease. Clinical manifestations have evolved, with a predominance of colitic forms characterized by fever, abdominal pain, and mucus-containing stools, often without pronounced tenesmus. The study highlights the need for improved diagnostic approaches and strengthened preventive strategies.

Keywords: shigellosis, epidemiology, adults, intestinal infections, diagnosis, *Shigella flexneri*

Introduction

Shigellosis is a major public health concern and remains one of the leading causes of bacterial gastrointestinal infections globally. Despite advances in hygiene, sanitation, and antimicrobial therapy, the disease continues to affect millions of individuals each year. The causative agents, bacteria of the genus *Shigella*, are characterized by high infectivity and the ability to cause disease with a very low infectious dose, making transmission particularly efficient.

Global epidemiological data indicate that shigellosis is responsible for a substantial burden of morbidity and mortality, especially in developing regions where sanitation systems may be inadequate. However, the disease is not limited to low-income countries and continues to occur in areas with relatively high standards of living, reflecting the complexity of its transmission dynamics.

Over recent decades, significant changes have been observed in both the epidemiology and clinical presentation of shigellosis. Traditionally considered a disease predominantly affecting children, current data suggest an increasing incidence among adults. Individuals aged 25–50 years appear to be particularly affected, possibly due to occupational exposure, dietary habits, and lifestyle factors.

Another important trend is the shift in the etiological structure of the disease. While *Shigella sonnei* was previously the dominant species in many regions, *Shigella flexneri* has become more prevalent in recent years. This shift is clinically relevant, as infections caused by *S. flexneri* are often associated with more severe manifestations.

Additionally, the growing problem of antimicrobial resistance poses a serious challenge for effective treatment. The irrational use of antibiotics contributes to the emergence of resistant strains, complicating therapy and increasing the risk of adverse outcomes.

Materials and Methods

This study is based on a retrospective analysis of clinical records of adult patients diagnosed with shigellosis over a ten-year period. Data were collected from patients treated in a regional infectious diseases hospital. The analysis included demographic characteristics, clinical manifestations, laboratory findings, and epidemiological data.

Patients were diagnosed based on a combination of clinical symptoms, epidemiological history, and laboratory confirmation where available. Standard diagnostic criteria were applied. Statistical analysis was performed to evaluate the distribution of cases across age groups, gender, and seasonal patterns.

Epidemiological Characteristics

The analysis revealed that shigellosis remains a significant component of acute intestinal infections among adults. The highest incidence was observed in the 25–50-year age group, indicating a shift in disease distribution compared to earlier decades.

Gender analysis showed a predominance of female patients, which may be associated with increased exposure to food preparation and household activities. Residence-based analysis demonstrated a higher incidence among rural populations, highlighting the role of environmental and sanitary factors such as water quality and food safety.

Seasonal trends indicate an increase in cases during summer and autumn. However, unlike previous decades, the seasonal pattern is less pronounced, suggesting changes in transmission dynamics.

Foodborne transmission was identified as the leading route of infection, particularly through dairy products. Waterborne transmission also contributed to disease spread, emphasizing the importance of safe drinking water.

Socio-economic factors play a crucial role in disease distribution. Higher incidence rates were observed among individuals with lower income levels, including agricultural workers and unemployed individuals.

Clinical Features

The clinical presentation of shigellosis has undergone notable changes in recent years. While classical severe forms with pronounced symptoms were common in the past, current cases more frequently present as mild or moderate disease.

The onset is typically acute, with fever, abdominal pain, and diarrhea as the main symptoms. Fever is usually short-lived, indicating a less severe intoxication syndrome compared to earlier periods.

Abdominal pain is often cramp-like and localized in the lower abdomen, although it may initially be diffuse. Diarrhea is a consistent symptom, often accompanied by mucus and occasionally blood.

Tenesmus, once considered a hallmark symptom, is now less frequently observed. Instead, patients may experience false urges to defecate.

The majority of cases are classified as moderate in severity, with a smaller proportion of severe and mild forms. The colitic form remains the most common clinical variant.

Diagnosis

Diagnosis of shigellosis remains challenging. Laboratory confirmation through bacteriological methods is not always successful, particularly when patients seek medical care **late** or have already received antibiotic therapy.

Modern diagnostic techniques, including molecular methods such as PCR, offer higher sensitivity and faster results. These methods are increasingly important in improving diagnostic accuracy.

Routine blood tests often reveal signs of inflammation, including leukocytosis and elevated erythrocyte sedimentation rate.

Treatment

Treatment of shigellosis depends on disease severity and patient condition. Rehydration therapy is essential and helps prevent complications associated with dehydration.

Antibacterial therapy remains a key component of treatment; however, increasing antibiotic resistance requires careful selection of drugs based on sensitivity testing.

Symptomatic treatment is also important and includes management of fever, pain, and gastrointestinal symptoms.

Early diagnosis and timely initiation of treatment significantly improve patient outcomes and reduce the risk of complications.

Discussion

The findings of this study confirm that shigellosis continues to evolve in both epidemiological and clinical aspects. The shift toward adult morbidity, changes in dominant pathogens, and modifications in clinical presentation reflect broader social and environmental changes.

The reduced severity of classical symptoms may complicate early diagnosis and requires increased attention from clinicians. At the same time, the persistence of moderate and severe cases indicates that the disease remains clinically significant.

Improving diagnostic methods, particularly through the adoption of molecular technologies, is essential. Additionally, preventive measures such as improving water quality, ensuring food safety, and promoting hygiene practices remain critical components of disease control.

Conclusion

Shigellosis remains a relevant and complex infectious disease requiring comprehensive control measures. Modern trends indicate changes in age distribution, clinical presentation, and etiological structure.

Effective management requires a combination of accurate diagnosis, appropriate treatment, and preventive strategies. Strengthening public health systems and increasing awareness are essential for reducing disease burden.

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