

A Narrative Overview of Clinical Phage Microbiology

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Abstract

In the identical that I became promoted to complete professor, a demonstration that I even have an worldwide popularity in my field, my branch instructed me that I had to domesticate an worldwide popularity. Despite numerous high-effect findings, I can't pique the hobby of our highbrow assets or improvement offices. I may want to move on with the diverse pinpricks that upload as much as me actually smacking my brow towards my desk. My colleagues and I like to approximately our jobs will we live in academia if we're so miserable. Because the reality is that notwithstanding a majority of these pinpricks and our moaning, we've got a few quite rattling right jobs. Unfortunately, this message isn't attending to our trainees.

Keywords: Biomedical • Microbiology • Numerous

Introduction

Infection is defined as the invasion of disease-causing organisms into the bodily tissues of a host organism, which can occur as a result of the interaction between pathogens and the defences of the hosts they infect. Urinary tract infection, after respiratory tract infection, is the second most common infection in humans, affecting 150 million people worldwide each year and posing a serious public health problem. It is most common in healthy women who do not have any underlying disease or functional or structural urinary tract anomaly. The most important risk factor for UTI is recent sexual activity, which may explain its higher incidence between the ages of 18 and 40 years; it is estimated that 50-60% of adult women will have at least one UTI episode during their lifetime [1].

Literature Review

In some clinical settings, however, other pathogens are emerging as the cause of these diseases. These microorganisms may have been overlooked or poorly classified due to a lack of distinctive phenotypic criteria, the consideration of their significant growth as microbiota contamination, and failure in detection by standard methods, sometimes due to their slow growth and the need for nutritionally demanding culture media. Advances in microbiological techniques have revealed new clinical and microbiological scenarios, increasing the detection of these pathogens and the institutionalisation of patients, the presence of diabetes, spinal cord lesions, urinary catheterization, prior urinary tract instrumentation, and/or antibiotic receipt. Major advances in clinical microbiology, such as the increasingly widespread use of mass spectrometry and molecular techniques, as well as the use of enriched media for demanding bacteria in prolonged culture, have resulted in diagnostic improvements and a more appropriate and environmentally friendly prescription of antibiotic treatments. Because some emerging microorganisms were regarded as contaminants, UTI may have been underdiagnosed [2].

Discussion

A wide variety of isolates, most frequently SVG corresponding to anginosus

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and constellatus species, were found to cause genital infections in female adults in this study. These microorganisms are common in the oral, gastrointestinal, and urogenital microbiota and can potentially cause infectious symptoms with a proclivity for abscess formation, but only rarely at the genital level, despite a possible association with intrauterine devices. There have also been reports of it being linked to potentially fatal diseases like Fournier's gangrene. Six of the eight cases (66.7%) of SVG isolates in the current study were symptomatic, and one had a tubo-ovarian abscess in the context of PID [3].

Other important microorganisms were isolated less frequently at the genital level, including *Pasteurella bettyae*, which was isolated in only three samples, two of which were from HIV patients; this species rarely causes disease in humans, though it has been linked to urethritis and balanitis and can occasionally cause fatal lung disease. Another microorganism found in female genital microbiota, has also been linked to polymicrobial pelvic infections and chorioamnionitis. It was isolated in three endocervical samples from current female adults, co-isolated in two of these samples but isolated alone in the third, which met PID criteria, indicating the need to consider its potential pathogenic role at this level [4,5].

Two isolates of meningitidis were found, one in a sample from an HIV-positive male with urethritis; this microorganism is becoming increasingly linked to cases of urethritis and proctitis in men who have sex with men. *Actinotignum* spp. and *Actinobaculum* spp. are Gram-positive bacilli genera that can cause urinary tract infections, bacteremia, and endocarditis, primarily in elderly patients with chronic disease. As a genital cause of balanitis and balanoposthitis. Two of the eight isolates found in genital infections came from patients with paediatric balanoposthitis, and antibiotic prescriptions support the genus' pathogenic role [6].

Conclusion

Urinary infections are typically mild; however, the clinical significance of this genus is gradually increasing due to the risk of dissemination and complications such as bacteremia and endocarditis. Higher age and the presence of urological disorders are the most common risk factors, and a statistically significant association with male sex and higher age was observed in the current series. In a higher percentage of symptomatic episodes than other genera and species, emphasising the importance of classifying these isolates as pathogens and acting accordingly. Given that 7.7% of patients with infection died from septic shock, it is critical to consider the possibility of complications as well as the age of the patients.

Acknowledgement

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Conflict of Interest

None.

References

1. Flores-Mireles, Ana L., Jennifer N. Walker, Michael Caparon and Scott J. Hultgren, et al. "Urinary tract infections: Epidemiology, mechanisms of infection and treatment options." *Nat Rev Microbiol* 13 (2015): 269-284.
2. Alós, Juan Ignacio. "Epidemiología y etiología de la infección urinaria comunitaria. Sensibilidad antimicrobiana de los principales patógenos y significado clínico de la resistencia." *Enferm Infecc Microbiol Clin* 23 (2005): 3-8.
3. Reu, Carlos E., Waldemar Volanski, Karoline C. Prediger and Geraldo Picheth, et al. "Epidemiology of pathogens causing urinary tract infections in an urban community in southern Brazil." *Braz J Infect Dis* 22 (2018): 505-507.
4. Rosales-Castillo, Antonio, Carmen Hidalgo-Tenorio, José María Navarro-Marí and José Gutiérrez-Fernández, et al. "Emerging presence of urethritis and balanitis by *Pasteurella bettyae*." *Infect Dis* 51 (2021): 492-494.
5. Moritz, F., E. Martin, J. F. Lemeland and G. Bonmarchand, et al. "Fatal *Pasteurella bettyae* pleuropneumonia in a patient infected with human immunodeficiency virus." *Clin Infect Dis* 22 (1996): 591-592.
6. Otero-Colón, Jonathan, Kristen L. Farraj and Zalak Desai. "An Uncommon Cause of Urinary Tract Infections: A Case Report." *Cureus* 14 (2022).

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