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A short Review of Post-exposure Prophylaxis and Preventive Treatment

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Abstract

Post-exposure prophylaxis (PEP) is a preventive treatment strategy used to reduce the risk of acquiring an infection after potential exposure to a specific pathogen. PEP is commonly employed in situations involving recent exposure to HIV, although it can also be utilized for other infections such as hepatitis B and C. The effectiveness of PEP depends on various factors, including the type of infection, the timing of initiation, and adherence to the prescribed regimen. Prompt administration of PEP within 72 hours (preferably within 24-48 hours) of exposure is crucial for optimal effectiveness. PEP for HIV typically involves a 28-day course of antiretroviral medications to inhibit viral replication and decrease the likelihood of establishing a permanent infection. However, it is important to note that PEP is not 100% effective and its success varies depending on multiple factors. While PEP can significantly reduce the risk of HIV transmission, it is not a substitute for regular preventive measures such as safe sex practices, condom usage, and pre-exposure prophylaxis (PrEP) for high-risk individuals. PEP can also be considered for potential exposure to hepatitis B and, in certain specific cases, hepatitis C. Healthcare providers play a critical role in assessing the risk of infection, evaluating the appropriateness of PEP, and providing guidance on the correct use of medications. Timely medical attention and open communication with healthcare professionals are vital in ensuring the most effective outcomes of PEP and minimizing the risk of infection.

Keywords: Post-exposure prophylaxis; pre-exposure prophylaxis; PrEP; Healthcare provider; medical attention

Introduction

Post-exposure prophylaxis (PEP) is a preventive treatment used to reduce the risk of acquiring an infection after potential exposure to a particular pathogen. PEP is commonly used in situations where there has been a recent exposure to HIV, but it can also be utilized for other infections such as hepatitis B and C. Regarding HIV, PEP is typically administered within 72 hours (and ideally within 24-48 hours) of potential exposure, as the earlier the treatment is initiated, the more effective it tends to be. These medications work by inhibiting the replication of the virus and reducing the likelihood of establishing a permanent infection [1].

It is crucial to note that PEP is not 100% effective, and its success depends on several factors, including the timing of initiation, adherence to the prescribed regimen, and the nature of the exposure. However, when taken correctly, PEP has been shown to significantly reduce the risk of HIV transmission. If you believe you have been exposed to HIV or any other infection, it is essential to seek medical attention as soon as possible. A healthcare professional will assess the situation, evaluate the risk of infection, and determine whether PEP is appropriate for your specific case. PEP is not a substitute for regular preventive measures such as practicing safe sex, using condoms, and taking pre-exposure prophylaxis (PrEP) for individuals at high risk of HIV infection. These preventive strategies should be discussed with a healthcare provider to ensure the most appropriate options are chosen based on individual circumstances [2].

Materials and Methods

Design and collection of data

We included returning travelers over the age of 18 who were willing to participate in this study and required PEP due to SRE abroad. Excluded were patients with PEP who had an animal-related incident in Germany. The doctor in control gave out the poll to the member following oral informed assent and was accessible to help the member at whatever point important during survey fruition. Personal information was not gathered. Information on demographics and travel, pre-travel advice, knowledge of rabies, characteristics of rabies exposure, actions taken after rabies exposure, and treatment in the international health care system were all included in the questionnaire. Questions about the published rabies risk were used to calculate a rabies knowledge score. Depending on how many questions were answered correctly, a maximum score of 12 could be achieved [3].

Guidelines for treatment and definitions

The WHO and the RKI defined SRE as a mammal biting, scratching, or licking a wound or mucous membrane. The not entirely set in stone by two doctors following the 4-eyes-rule in light of the poll. The case was conservatively placed in category III if the exposure could not be distinguished between categories II or III. Sign for Enthusiasm was assessed utilizing the RKI proposals. After a series of at least three vaccine doses given at the appropriate interval, the German RKI recommends that PrEP be completed [4].

Ethics

According to German guidelines, the study protocol and questionnaire (PV5970) were reviewed and approved by the ethics committee Hamburg. If an indicated administration of RIG was missed at the first vaccination, it can still be given until seven days later. No additional written informed consent was deemed necessary prior to participant enrollment because the ethics committee determined that a participant's agreement to participate in the study and complete the

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questionnaire was considered oral informed consent [5]. Using this simplified procedure, we did not include anyone under the age of 18 in the study, as the local ethics committee had decided. We didn't gather individual recognizable information and information assortment and investigation were kept unknown [6].

Results

The effectiveness of Post Exposure Prophylaxis (PEP) in preventing infection depends on various factors, including the type of infection, the timing of initiation, and adherence to the prescribed regimen. Here are some general outcomes associated with PEP for different infections:

HIV: When PEP is initiated promptly and taken consistently for the recommended duration, it has been shown to significantly reduce the risk of HIV transmission. However, it is important to note that PEP is not 100% effective, and there have been cases of HIV transmission despite its use. The overall effectiveness of PEP in preventing HIV infection can vary, but estimates suggest that it can reduce the risk by about 80% or more when taken correctly [7].

Hepatitis B: PEP can be used for individuals who have been exposed to hepatitis B virus (HBV) through occupational or sexual exposure, among other routes. The effectiveness of PEP in preventing HBV infection is relatively high, particularly when initiated promptly after exposure. Timely administration of HBV vaccine and hepatitis B immunoglobulin (HBIG) along with PEP can further enhance its effectiveness [8].

Hepatitis C: PEP is not commonly used for hepatitis C virus (HCV) exposure, as there is limited evidence supporting its effectiveness in preventing HCV transmission. However, in some specific situations, healthcare providers may consider using PEP for HCV, particularly when there is a high-risk exposure involving a known HCV-positive source [9].

Conclusions

German travelers appear to lack awareness of proper first aid and the urgency of seeking prompt professional treatment, including PEP, following an SRE. Venture out experts need to instruct voyagers about rabies risk, counteraction measures and the right way of behaving after SRE including satisfactory injury therapy and looking for guaranteed clinical assistance for Enthusiasm. Travelers with a high rabies exposure risk and those visiting areas with limited access to healthcare should receive PrEP generously [10].

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References

1. Bower H, Johnson S, Bangura MS, Kamara AJ, Kamara O, et al. (2016) Exposure-Specific and Age-Specific Attack Rates for Ebola Virus Disease in Ebola-Affected Households Sierra Leone. Emerg Infect Dis 22:1403-1411.
2. Brannan JM, He S, Howell KA, Prugar LI, Zhu W, et al. (2019) Post-exposure immunotherapy for two ebolaviruses and Marburg virus in nonhuman primates. Nat Commun, 10:105.
3. Cross RW, Bornholdt ZA, Prasad AN, Geisbert JB, Borisevich V, et al. (2020) Prior vaccination with rVSV-ZEBOV does not interfere with but improves efficacy of postexposure antibody treatment. Nat Commun, 11:3736.
4. Henao-Restrepo AM, Camacho A, Longini IM, Watson CH, Edmunds WJ, et al. (2017) Efficacy and effectiveness of an rVSV-vectored vaccine in preventing Ebola virus disease: final results from the Guinea ring vaccination, open-label, cluster-randomised trial (Ebola Ça Suffit!). Lancet Lond Engl 389:505-518.
5. Jacobs M, Aarons E, Bhagani S, Buchanan R, Cropley I, et al. (2015) Post-exposure prophylaxis against Ebola virus disease with experimental antiviral agents: a case-series of health-care workers**.** Lancet Infect Dis 15:1300-1304.
6. Ponsich A, Goutard F, Sorn S, Tarantola A (2016) A prospective study on the incidence of dog bites and management in a rural Cambodian, rabies-endemic setting. Acta Trop août 160:62-67.
7. Cantaert T, Borand L, Kergoat L, Leng C, Ung S, et al. (2019) A 1-week intradermal dose-sparing regimen for rabies post-exposure prophylaxis (RESIST-2): an observational cohort study. Lancet Infect Dis 19:1355-1362.
8. D'Souza AJ, Mar KD, Huang J, Majumdar S, Ford BM, et al. (2013) Rapid deamidation of recombinant protective antigen when adsorbed on aluminum hydroxide gel correlates with reduced potency of vaccine. J Pharm Sci 102:454-461.
9. Hopkins RJ, Howard C, Hunter-Stitt E, Kaptur PE, Pleune B, et al. (2014) Phase 3 trial evaluating the immunogenicity and safety of a three-dose BioThrax® regimen for post-exposure prophylaxis in healthy adults. Vaccine 32:2217-2224.
10. Longstreth J, Skiadopoulos MH, Hopkins RJ (2016) Licensure strategy for pre- and post-exposure prophylaxis of biothrax vaccine: the first vaccine licensed using the FDA animal rule. Expert Rev Vaccines 15:1467-1479.