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Short Communication

Health Effective Vaccination and Prevention of Hospital-Acquired Hepatitis

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DESCRIPTION

Hospital-acquired hepatitis, also known as nosocomial hepatitis, refers to hepatitis infections contracted within healthcare settings. This form of hepatitis can result from various factors, including improper sterilization of medical equipment, unsafe injection practices, and insufficient hygiene among healthcare workers. Hepatitis B and Hepatitis C are the most common types associated with hospital-acquired infections [1-3].

Hospital-acquired hepatitis

Hepatitis is an inflammation of the liver caused by viral infections, with Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) being significant concerns in healthcare settings. These viruses can be transmitted through contact with infected blood or body fluids, making the hospital environment, where such exposures are frequent, a high-risk setting [4].

Hepatitis B: Hepatitis B can cause both acute and chronic liver disease. The virus is highly contagious and can survive outside the body for at least seven days, posing a significant risk in medical settings where blood and bodily fluids are handled frequently.

Hepatitis C: Hepatitis C primarily causes chronic infection, which can lead to severe liver damage, cirrhosis, and liver cancer. Unlike Hepatitis B, there is no vaccine for Hepatitis C, which underscores the importance of stringent infection control practices to prevent transmission [5].

Causes and transmission

Several factors contribute to the transmission of hepatitis in hospitals.

Contaminated medical equipment: Reusing needles, syringes, or other medical instruments without proper sterilization can lead to the transmission of hepatitis. Healthcare workers who come into contact with infected blood or bodily fluids without appropriate protective measures can contract the virus [6].

Unsafe injection practices: Using a single needle for multiple patients or improper handling of needles increases the risk of spreading the virus. Transfusions involving contaminated blood or blood products can transmit hepatitis [7].

Role of vaccination

Vaccination is one of the most effective strategies in preventing hospital-acquired Hepatitis B. The Hepatitis B vaccine provides long-term protection and is recommended for all healthcare workers and others at high risk of exposure. The Hepatitis B vaccine is typically administered in three doses over six months. First dose is given at the initial appointment. Second dose is administered one month after the first dose. Third dose is given six months after the first dose [8].

In some cases, a rapid schedule is used, especially in high-risk situations, to provide quicker immunity. The vaccine induces an immune response that prepares the body to fight the virus if exposed in the future [9].

Effectiveness and safety

The Hepatitis B vaccine is highly effective, with more than 90% of vaccinated individuals developing immunity. It is also safe, with few side effects, mostly limited to mild reactions like soreness at the injection site or mild fever [10].

Vaccination policies

Implementing comprehensive vaccination policies in healthcare settings is vital to prevent the spread of hepatitis. Ensuring all healthcare workers receive the Hepatitis B vaccine. This is often a requirement in many countries and institutions, particularly for those involved in direct patient care or handling blood and bodily fluids. Providing vaccination to individuals before they are exposed to HBV, especially those entering healthcare professions. Administering the Hepatitis B vaccine and hepatitis B immunoglobulin to individuals exposed to HBV, such as through needlestick injuries. Regular screening of healthcare workers for hepatitis infections to identify and manage cases promptly [11].

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CONCLUSION

Vaccination against Hepatitis B is a critical component in preventing hospital-acquired hepatitis, safeguarding both healthcare workers and patients. While there is no vaccine for Hepatitis C, rigorous infection control practices are essential to mitigate the risk. Implementing comprehensive vaccination policies, alongside strict adherence to hygiene and safety protocols, can significantly reduce the incidence of hepatitis infections in healthcare settings.

REFERENCES

1. Hutin YJ, Goldstein ST, Varma JK, O Dair JB, Mast EE, Shapiro CN, et al. An outbreak of hospital-acquired hepatitis B virus infection among patients receiving chronic hemodialysis. Infect Control Hosp Epidemiol. 1999;20(11):731-735.
2. Waleed M, Abdallah MA, Kuo YF, Arab JP, Wong R, Singal AK. Higher frequency of hospital-acquired infections but similar in-hospital mortality among admissions with alcoholic hepatitis at academic vs. Non-academic Centers. Front physiol. 2020; 11:594138.
3. Vonberg RP, Gastmeier P. Hospital-acquired infections related to contaminated substances. J Hosp Infect. 2007;65(1):15-23.
4. Maindad DG, Shenoy S, Gopal S, Tantry BV. Treatment of Hospital-Acquired Infections in Patients with Cirrhosis–New Challenges. Infect Drug Resist. 2022;1039-1048.
5. Campillo B, Dupeyron C, Richardet JP, Mangeney N, Leluan G. Epidemiology of severe hospital-acquired infections in patients with liver cirrhosis: effect of long-term administration of norfloxacin. Rev Infect Dis. 1998;26(5):1066-1070.
6. Di Cola S, Gazda J, Lapenna L, Ceccarelli G, Merli M. Infection prevention and control programme and COVID-19 measures: Effects on hospital-acquired infections in patients with cirrhosis. JHEP Rep. 2023;5(5):100703.
7. Curtis SJ, Worth LJ, Stuart RL, Marshall C, Johnson PD, Attwood LO, et al. Performance of the Hospital-Acquired Complication (HAC) algorithm for detecting hospital-onset bloodstream infections. Infect Dis Health. 2019;24:6-7.
8. Yerzhan A, Razbekova M, Merenkov Y, Khudaibergenova M, Abdildin Y, Sarria-Santamera A, et al. Risk Factors and Outcomes in Critically Ill Patients with Hematological Malignancies Complicated by Hospital-Acquired Infections. Medicina. 2023;59(2):214.
9. Penrice DD, Shah S, Kezer CA, Peeraphatdit TB, Sanyal AJ, Davis B, et al. Risk Prediction of Nosocomial and Posthospital Discharge Infections in Alcohol-Associated Hepatitis. Hepatol Commun. 2021;5(12):2096-2103.
10. Szomor KN, Dencs A, Toth G, Kovács GM, Saleh Ali Y, Berencsi G, et al. Variability of the PreS1/PreS2/S regions of hepatitis B virus in Hungary. Arch Virol. 2007;152:697-704.
11. Ishimaru T, Wada K, Smith DR. A consensus for occupational health management of healthcare workers infected with human immunodeficiency virus, hepatitis B virus, and/or hepatitis C virus. J Occup Health. 2017;59(3):304-308.