

The prevalence of latent/chronic infection in liver transplant candidates in Taleghani Hospital of Tehran, Iran, from 2020 ~~untill~~until 2021

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Background: Due to chronic immunosuppressive therapy, patients receiving organ transplants are at risk for reactivation of various infections. Due to the complications in the ~~proeess~~course of diagnosing and treating the post-transplant infection, screening ~~the~~transplant recipients and donors is vital. ~~Therefore~~Thus, the present study aimed to study the prevalence of various latent infections in pre-transplanted patients.

Methods: This retrospective cohort study was performed between March 2020 ~~to~~and 2021. A total of 193 patients receiving a liver transplant in Taleghani Hospital, Tehran, Iran were enrolled.

Results: One-hundred and three (53.4%) patients were men, with an average age of 48.4 ± 13.3 years. Among viruses, 177 (91.7%) patients had a positive IgG titer for CMV. Anti-EBV IgG was positive in 169 (87.6%) patients. One-hundred and seventy-five (90.7%) patients had a positive IgG titer for the VZV. One-hundred and sixty-six (86.0%) cases had positive IgG anti-HSV antibodies. According to our findings, none of the patients were infected with HIV, but 9 (4.7%) cases and 141 (73.1%) had positive anti-HCV and anti-HAV IgG antibodies, respectively. HBV surface (HBs) antigen was also reported positive in 17 (8.8%) patients, while the HBs antibody was positive in 29 (15.0%) patients.

Conclusion: In our study, most of the patients had positive serology for latent viral infections such as CMV, EBV, VZV, and HSV, but the prevalence of latent tuberculosis and viral hepatitis was low among transplant candidates.

Introduction

Many human diseases are eventually treated with solid organ transplants, and due to the advancement of surgical techniques and immunosuppressive therapies, this method has improved the quality of life and increased the survival of transplant recipients (1, 2). Cirrhosis caused by chronic liver disease is the twelfth leading cause of death in the United States, ~~and with~~ liver transplantation ~~is being~~ recognized as an effective treatment for these patients with irreversible liver failure (3). However, 10% of transplant recipients do not survive the first year of transplantation, while the five-year survival rate of these patients is about 70% (4, 5). Among the factors that cause mortality among these patients, infection is responsible for the death of more than 50% of the recipients' population (6). The prevalence of latent infections is different in various studies, for example CMV infection was found in 44 to 85% of liver transplant recipients (7) and the serum prevalence of HSV-1 virus in organ transplant recipients was seen up to 80% in people under 60 years of age, (8) while 90% of liver transplant recipients were infected with VZV (9).