

**Evaluating the effect of DAAs treatment in
patients with chronic HCV infection with past
exposure to CMV infection**

Thesis

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By

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Abstract

Background: Direct-acting antiviral agents (DAAs) have been the mainstream treatment of hepatitis C (HCV). Cytomegalovirus (CMV) is a ubiquitous b-herpes virus family, which has a widespread infection. Infection with CMV is self-limited without eradication. Instead, the virus remains in a latent state, but reactivation may occur during times where the immune system is suppressed.

Aim of the work: The study was conducted to evaluate the indirect effect of DAAs treatment in patients with chronic HCV and past exposure to CMV infection.

Patients and methods: A prospective cohort study was performed on one hundred and ninety two Egyptian patients with chronic HCV infection who were treated with DAAs. They were tested for CMV confection before treatment and followed up and tested for sustained virological response (SVR12). Patients with latent CMV were tested for reactivation by testing for CMV IgM at end of treatment (EOT) (W12).

Results: The study included seventy patients with latent CMV-coinfection (W0). CMV was reactivated in twenty patients (20/70: 28.5%) at EOT (positive CMV IgM); CMV DNA viremia by PCR was detected in thirteen patients (13/20: 65%). They were asymptomatic with significant increase in S. Bilirubin and FIB-4 &APRI scores at EOT, which decreased at W24 in comparison to baseline. All of them achieved SVR. Overall SVR was 97.4% among total studied patients (N 192).

Conclusion: Reactivation of CMV may occur with clearance of HCV with DAAs. Presence of CMV coinfection before treatment doesn't affect response of treatment of HCV to DAAs.

Key words: Hepatitis C virus, Direct acting antiviral agents, Cytomegalovirus and Reactivation.