

The role of cell mediated immunity in reactivation of latent Varicella-Zoster virus

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Abstract:Background:Varicella-Zoster virus the same virus that causes chicken pox. After an attack of chickenpox (varicella), the virus lies dormant (asleep) in the nerve tissue. The cell mediated immunity plays a role in suppressing the virus and therefore a decline in this immunity allows the virus to resurface from latency.

Objective: An evaluation of function of some immune cells in patients with herpes zoster.

Methods: Fifty patients with herpes zoster attending Marjan Hospital in Babylon – Iraq, and thirty healthy control were subjected for this study. Serum samples were collected from patients and from healthy control. All samples were investigated for measuring the level of CD4, CD8 by ELISA to investigate their role in the immune-regulatory mechanisms involved in reactivation of latent VZV.

Results:There is significant rise in the levels of CD8 (21.42 ± 5.43) ng/ml of shingles patients when compared with the healthy control group (19.11 ± 3.29) ng/ml, while the levels of CD4 were significantly lower in patients (6.70 ± 0.97) ng/ml when compared with healthy control group (9.36 ± 2.02) ng/ml.

Conclusions:CD4 cells have the main role in suppressing of VZV reactivation, and people with low CD4 counts have a higher risk than the general population.

Keywords:Varicella, Herpes zoster, Latency, Cellular immunity.