

Jordan University of Science and Technology

Seroprevalence of herpes simplex virus types 1 and 2 and correlates of infection in Jordan

Authors: Samer Swedan, Alia' Darabseh

Abstract: Background: Herpes infections are common infections among populations. Herein, a cross-sectional study was used to determine the seroprevalence of herpes simplex virus type 1 (HSV-1) and herpes simplex virus type 2 (HSV-2) IgG antibodies and their association with potential infection risk factors among Jordanians. Methods: A total of 759 serum samples were collected (January to February 2020) and analyzed for HSV-1 and HSV-2 IgG antibodies by enzyme-linked immunosorbent assay. Estimates for population seropositivity were determined by weighting the age-specific seroprevalence by the size of the population in each age stratum. Results: The population estimate for HSV-1 seroprevalence was 75.3%. After adjustment for possible confounders, regression analysis revealed higher seroprevalence with increase in age ($p < 0.005$) and low household income ($p = 0.002$). The population estimate for HSV-2 seroprevalence was 2.9%. No significant differences in HSV-2 seroprevalence were observed in association with age, gender, family size, educational level, and socioeconomic status, likely due to low seropositivity. Conclusions: Jordanians have high HSV-1 and low HSV-2 seroprevalence. Periodical studies might be needed to evaluate changes in HSV-1 and HSV-2 seroprevalence over time. This study provides essential epidemiological data for Jordan and the Middle East and North Africa region .