

Abstract

Rising HIV Seroconversion Rates and Associated Risks Among Civilian Employees of Pakistan Army: A Case Control Study - Pakistan, 2017

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Abstract

Background: In 2004, Pakistan escalated from low-prevalence to concentrated phase of HIV epidemic. Despite global decline in HIV incidence since 1997, rate of HIV infections in Pakistan is persistently rising since 1990. Available literature focuses on key populations or localized outbreaks and is limited by short study duration and regional applicability of results.

Objective: We studied HIV seroconversion trends over a period of 8 years in a geographically diverse population and evaluated associated risk factors.

Methods: A desk review of HIV surveillance data from 2010 to 2017 was carried out at Armed Forces Institute of Pathology. A case was defined as any adult enrolled in Pakistan Army as civilian employee, initially screened for HIV but later seroconverted on ELISA and western blot. Case-control study was conducted on cases diagnosed in 2017. Age and sex matched controls were identified from same population sub-group. Structured telephonic interviews were conducted, and statistical analysis done at 5% margin of error.

Results: From 2010-2017, 109 cases of HIV were notified from 75,000 HIV negative civilian workers. Annual case count remained <12 till 2016 when it rose to 24. Upward trend continued in 2017 with 34 cases reported to date (183% increase from baseline). Acquisition of HIV was significantly associated with commercial sex activities (OR=5.71; 95%CI: 1.25-395). No statistically significant association was found for blood transfusion, surgical/dental procedure, barber shops visits, piercing or substance abuse.

Conclusions: HIV seroconversion rates among Pakistan Army civilian employees have increased significantly in past 2 years. Unlike HIV outbreaks previously reported from Pakistan, sexual route has been recognized as the predominant mode of transmission. Consequently, sex education sessions were conducted in all formations and a section on prevention of STIs was included in Pak Army health pamphlet. Similar focus is mandated on prevention of sexual transmission of HIV at national level as well for all vulnerable populations.

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