

Prevalence of Seizures in HIV Patients as Measured in the Outpatient Setting

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Introduction

Patients with HIV are predisposed to numerous opportunistic and CNS infections that significantly increase the risk of developing seizures, and some previous studies suggest that the Human Immunodeficiency Virus may itself directly provoke seizures¹. One previous study described the prevalence of epilepsy for an inpatient HIV patient population as 6.1%², but no study has established this prevalence or analyzed the causes in a large, purely outpatient group of HIV patients. Previous studies on this topic have been limited by sample size, and the vast majority were conducted in developing nations where tuberculosis is common. The previously analyzed inpatient HIV populations were likely more ill than the general HIV population, and this sampling may have caused an overstatement of seizure prevalence and skewed the causes that were found for new onset seizures. Analysis of an entire outpatient clinic population may help to clarify some of these issues. Establishing a true prevalence and analyzing temporal relationships between seizures and HIV infection may shed light on the virus' possible role in developing epilepsy.

Methods

The electronic charts of HIV patients who visited a large outpatient clinic were searched for those who also have a diagnosis of epilepsy or seizure. The total number of unique patients in two separate fiscal years with both epilepsy and HIV was divided by the total number of HIV patients seen to determine the prevalence of seizures in HIV patients in both years. The charts of patients with both seizure/epilepsy and HIV were also searched for whether the seizures preceded the HIV infection.

Fiscal Year	Number of HIV pts	Number of Seizure + HIV pts	Prevalence of Seizures in HIV pts
2008	3416	140	4.0%
2009	3671	136	3.7%

Population	Prevalence of Seizures
Inpatient HIV	6.1%
Outpatient HIV	3.7-4.0%
General U.S. population	2%

Fiscal Year	Seizures Prior to HIV	Seizures After HIV	Unknown Temporal Relation
2008	24 (17.1%)	67 (47.9%)	49 (35%)
2009	31 (22.8%)	52 (38.2%)	53 (39%)

Results

For fiscal years 2008 and 2009, respectively, 3,416 and 3,671 total HIV patients visited the clinic and 140 and 136 of them had seizures. The prevalence for 2008 was 4.0% and 2009 was 3.7%. Of patients with seizures in fiscal year 2008, 24 (17.1%) had seizures prior to HIV infection, 67 (47.9%) developed seizures after HIV infection, and the temporal relationship of HIV and seizures was unknown in 49 (35%) patients. Of HIV patients with seizures in fiscal year 2009, 31 (22.8%) had seizures prior to HIV infection, 52 (38.2%) developed seizures after HIV infection, and the temporal relationship of HIV and seizures was unknown in 53 (39%) patients.

Conclusion

- The prevalence of seizures in HIV-infected patients in a large outpatient setting is 3.7-4.0%.
- The prevalence of seizures in HIV patients is lower when measured in the outpatient setting than when measured in the inpatient setting (6.1%).
- The prevalence of seizures is higher in HIV patients than has been reported for the general U.S. population, which is 2%³.
- There appears to be a higher percentage of patients who developed seizures after, rather than before, acquisition of HIV.

References

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