

EDITORIAL

Neurological Emergencies in HIV Patients

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Introduction

HIV/AIDS epidemic currently in India is quite under control, the efforts of NACO and community at large has led to this. The current prevalence of HIV among adults is around 0.3%, the widespread prevention and control strategies are the main reason behind the same. HAART coverage has also increased significantly which has played a major role in not only controlling the epidemic but also in the change of clinical scenario and clinical affection in patients of HIV/AIDS. The neurological complications arising in HIV patients, either due to opportunistic infections or due to the disease per se have also declined due to early and effective HAART.

Neurological Emergencies in HIV

The incidence of neurologic complications has indeed decreased since the advent of HAART, despite these achievements, new patterns of HIV related disease keep emerging as a result of patient's living longer, including milder forms of cognitive deficits.

Keeping the above perspective in mind it is still essential to state and highlight that neurological manifestations in this group of patients is quite varied and warrants a judicious

Table 1: Neurologic Complications of HIV Infection by Localization

Brain: Focal; Toxoplasmic encephalitis, Primary CNS lymphoma, Progressive multifocal leukoencephalopathy HIV-associated stroke, Bacterial abscess due to atypical organisms

Diffuse: HIV-associated dementia, CMV encephalitis, VZV encephalitis, Postinfectious encephalomyelitis

Meninges: Cryptococcal meningitis, Tuberculous meningitis, Neurosyphilis, HIV meningitis

Spinal cord: HIV vacuolar myelopathy, Myelitis due to VZV, HSV, CMV, Toxoplasma,

Peripheral nervous system: Nerve and nerve roots HIV distal sensory polyneuropathy, Antiretroviral drug toxic polyneuropathy, CMV polyradiculopathy, Chronic inflammatory demyelinating polyneuropathy HIV or HZV cranial neuropathy, HIV or CMV mononeuropathy multiplex

Muscle: HIV myopathy, Zidovudine myopathy

assessment and management on the part of the treating physician in order to minimize the mortality and morbidity.

The degree of immunosuppression which can be assessed by CD4 counts of the patient acts as one of the markers to help in differential diagnosis of various neurological pathologies, for eg CNS TB can affect the HIV patient at any level of immunosuppression while cryptococcal meningitis is more commonly observed at CD4 < 200.

The patient's of HIV/AIDS can have pretty much any site of nervous system being affected, CNS, PNS, meninges etc to enumerate a few (Table 1) It is worth mentioning here that infections seem to be the most common acute nervous system presentations but other affections of it can also lead to presentation of patient in emergency situations.

Approach for a Treating Clinician

Due to the myriad presentations of nervous system, it is worth considering, that for a treating physician a schematic approach always assists in better diagnosis and management of the patient.

First the acute v/s chronic presentation helps to narrow down the etiologies, as we are discussing emergencies here we would like to emphasize more on the acute presentations.

If the HIV/AIDS patient presents acutely it is worth assessing the immunocompromised state and whether the patient is on HAART or not, and if on HAART duration and regimen along with compliance is equally important.

The other step would be to localize the lesion of the patient with detailed history, examination and investigations according to the localization.

Meningeal involvement warrants the consideration for tuberculous meningitis primarily, thus after an imaging to rule out space occupying lesion a CSF examination is very

essential along with a NAAT (genexpert) to rule out multidrug resistance, which is very common in such patients in Indian scenario. The other important organism in HIV/AIDS patients commonly causing meningitis includes Cryptococcal infection, where again a CSF examination along with Cryptococcal antigen tests come handy for the diagnosis.

Viral encephalitis due to HIV, HSV, CMV, VZV are also observed in HIV patients where they present acutely and so a consideration for pan neurotropic screening in CSF for diagnosis is worth considering if such a scenario arises.

Toxoplasmosis in HIV patients leads to a focal lesion and hence an imaging with analysis by an expert is very important for timely intervention and its differentiation with tuberculomas and CNS lymphomas.

It is important to mention here that IRIS phenomenon can be one of the reasons of any of the neurological emergencies in HIV patients, thus it is mandatory to elicit the history of HAART and duration of its intake.

GBS or AIDP (Acute inflammatory demyelination syndrome) and PML (progressive multifocal leukoencephalopathy) are some of the conditions which can present acutely and hence warrants consideration in HIV patients.

We are currently in era of a widespread HAART coverage and hence it is paramount for the physician to not forget about ADRs (adverse drug reactions) in all neurological emergencies of HIV patients.

It is worth mentioning a word that Psychiatric emergencies should also be always kept in mind while assessing the HIV patients due to the intense stress of the disease and the stigma attached to it on the patient. These could act as confounders for the appropriate

diagnosis of Neurological emergencies and might derail the approach of management and outcome.

Conditions like stroke, hemorrhage and venous sinus thrombosis are cerebrovascular events which are equally prevalent in this population as in general population at large.

Conclusion

Despite the success of HAART, HIV-infected individuals are still at risk for a number of neurological complications. Increasing level of

immunocompromised status predisposes them to the same. It is thus essential for the treating physician to keep a comprehensive view and formulate a logical approach for patients presenting with neurological manifestations, as timely diagnosis and management significantly reduces the neurological morbidity and mortality in patients.

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