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P1119

Progressive multifocal leukoencephalopathy with purely infratentorial manifestation

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Introduction Progressive multifocal leukoencephalopathy (PML) is a frequent complication of AIDS in advanced stages representing a slow virus infection with JC-virus. The introduction of highly active antiretroviral therapy (HAART) seems to have a positive impact on prognosis.
Case report We present the case of a 33-year-old caucasian male with first diagnosis of HIV infection (initial CD4 + cell count 322/µl, virusload 50.000 RNA copies/ml), who had been suffering from a slowly progressive spastic tetraparesis since 2/98 and bilateral visual disturbances with a reduced central vision and metamorphopsia. In 12/98 cranial MRI showed patchy hyperintense lesions located in the left crus cerebri extending downwards into the pons and medulla on T2WI without pathological contrast enhancement. CSF revealed only positive oligoclonal bands and a mild elevation of proteins. Magnetic evoked potentials showed pathologically central conduction times to upper and lower extremities. Ophthalmological examination was normal. Standard serological and CSF virus, bacterial and fungal tests were negative. Under combined antiretroviral therapy CD4 + cell count rose to 812/µl. Therapy with high dose intravenous zidovudine and foscavir as well as pulse steroids (for suspected lymphoma) did not yield any benefit. PCR for Polyoma-JC-virus turned out to be positive after a relentless course with progressive tetraparesis and bulbar palsy. The patient died shortly thereafter. Necropsy showed the histological findings of PML.
Conclusions This case demonstrated that PML may present with purely infratentorial manifestation and, thus, has to be taken into the differential diagnosis of multifocal brainstem lesions in HIV infected patients.

P 1120

Interferon production in blood and CSF of patients with lymphocytic meningitis

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Introduction The interferon system is part of an unspecific immune response induced mainly by viruses. Some of the antiviral effects of class I interferons are contributed to Mx proteins. The hypothesis that interferons play a role in the early phase of host defence is tested by serial measurements of interferon γ (IFG) and Mx in blood and CSF of patients with lymphocytic meningitis.
Methods CSF and blood were taken serially in the first 4 weeks from 12 patients with clinical signs of meningitis (2 herpes-simplex, 4 Borrelia burgdorferi, 6 without identification of infectious agent). IFG was measured by flowcytometry of stimulated blood and CSF lymphocytes. Mx protein was detected from lysed blood by ELISA.
Results The percentage of IFG producing CSF lymphocytes was initially significantly higher in the group with viral meningitis than in the group with borreliosis. IFG production reached a peak in blood and CSF in the second week, independently from the infectious agent, whereas the Mx protein concentration showed a slower increase.
Conclusion Virus associated CNS infections are stronger inducers of IFG in the early phase of host defence than Borrelia burgdorferi. The different interferon groups follow a distinct time course in infections of the CNS.

P 1121

Neurological findings in 15 cases of AIDS in Myanmar

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AIDS is increasingly becoming one of the major health threats to developing countries. Neurological manifestations of AIDS in tropical countries can be classified in 3 groups: the primary manifestations due to a direct effect on the nervous system (AIDS encephalopathy, AIDS encephalitis, sensory neuropathy), secondary manifestations of the nervous system due to opportunistic infections (TBC, toxoplasmosis, candida, etc.), tertiary manifestations of the nervous system (drug abuse, drug therapies, malnutrition/malabsorption, indirect manifestations of AIDS -infection).
15 patients were clinically examined in the Hospital for Infectious Diseases, Yangon 1993 and 2000, 13 males, 2 females. 6 patients were drug abusers. 8 got their infection heterosexually, 1 homosexually (male). Encephalopathy was diagnosed in all 15 patients, HIV infection being supposedly the main cause, in addition exogenous factors, in particular malabsorption and malnutrition, were also important. Focal neurological symptoms were found in 8 of the 15 patients, due to focal encephalitis. Meningitis was seen in 2 patients. All 15 patients showed polyneuropathy with a predominance of sensory symptoms, malnutrition and malabsorption are supposed to be the main cause. Two patients had a midbrain syndrome phase II, one patient a beginning apallic syndrome/vegetative state. 10 of 15 patients were diagnosed to have TBC, 6 had candida infections, 2 toxoplasmosis, 1 crypto-coccus infection. While in 1993 treatment was directed against secondary infection (TBC, etc.), recently antiretroviral drugs are used. Modern diagnostic methods(cerebral CT, CD4 -counts) are now also available
13 of 15 patients were cared for by their relatives, even in the hospital, and were thus no outcasts, an effect of Buddhist tradition in Myanmar. The official medical system of Myanmar gives AIDS patients special care status.

P4151

Impact of highly active antiretroviral therapy (HAART) on incidence and prevalence of HIV-associated neurological disorders

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Introduction To determine the change of incidence and prevalence of neurological disorders caused by the human immuno-

Neurological findings in 15 cases of AIDS in Myanmar

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Introduction

Acquired immune deficiency syndrome (AIDS) is the result of an infection with the human immunodeficiency virus (HIV). This virus attacks selected cells of the immune, nervous, and other systems impairing their proper function. HIV infection may cause damage to the brain and spinal cord, causing encephalitis, meningitis, nerve damage, difficulties in thinking (i.e., AIDS dementia complex), behavioural changes, poor circulation, headache, and stroke. AIDS-related cancers such as lymphoma and opportunistic infections may also affect the nervous system. Neurological symptoms may be mild in the early stages of AIDS, but may become severe in the final stages. Hence, neurological manifestations of AIDS in tropical countries can be classified in 3 groups:

Primary manifestations due to a direct effect on the nervous system (AIDS encephalopathy, AIDS encephalitis, sensory neuropathy)

Secondary manifestations of the nervous system due to opportunistic infections (tuberculosis, toxoplasmosis, candida-infection, cryptococcosis ...)

Tertiary manifestations of the nervous system due to malnutrition/malabsorption, multiple drug therapies and indirect manifestations as a result of AIDS.

Common neurological manifestations of AIDS are presented in 15 case examined in Myanmar.

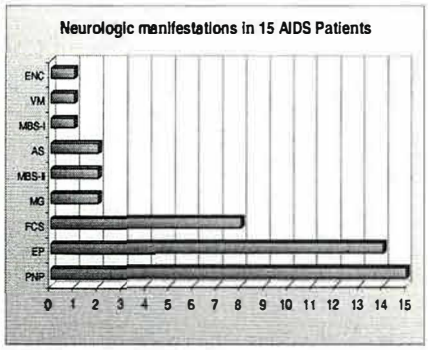


figure 1.

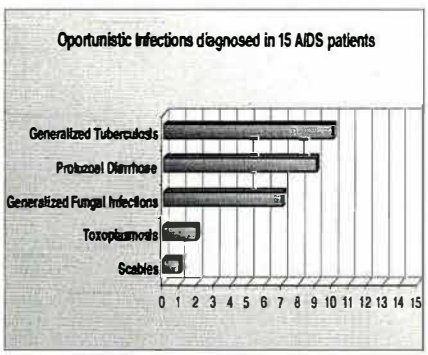


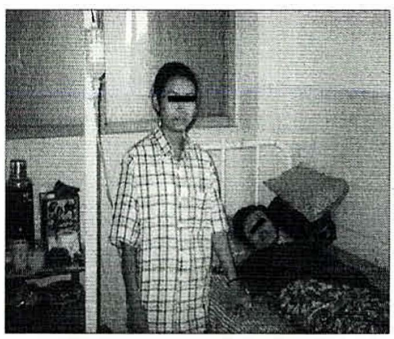
figure 2.

Conclusion

The prognosis for individuals with AIDS in recent years has improved significantly in western countries because of new drugs, educational and preventive efforts. Unfortunately, the high costs of those medications makes them unaffordable for patients in tropical countries. The complications of HIV are dynamically evolving over time. Neurologic complications typically occurring in advanced disease states are increasing in incidence even while some of the early complications associated with AIDS are less commonly encountered due to improved preventive therapy. The impact of the new generation of antiretroviral drugs, and the impact of predominantly multidrug therapy remain to be seen. Several of the key new drugs fail to penetrate the brain, thus making it possible that the incidence of neurologic disease may continue to increase. In Myanmar, the major neurological complications (figure 1) are not due to the neurological manifestation of the HI Virus per se, but due to frequent opportunistic infections, as shown in figure 2. To combat those complications, simple antibiotic treatment would often be sufficient to prevent the associated high morbidity and mortality. Although there is a lack of resources and medication for the therapy according to western standard, this is different the aspect of care for those patients. All examined patients were cared for by their relatives, even in the hospital. They were not treated as outcasts, an effect of Buddhist tradition in Myanmar. The official medical system of Myanmar gives AIDS patients special care status.

Methods

15 patients were clinically examined in the Hospital for Infectious Diseases, Yangon, during 1993 and 2000. All cases were examined by one clinician, Univ. Prof. Dr. F. Gerstenbrand. Neurological examination was performed according to the classical central European rules. At the time of patient examination sophisticated laboratory tests, imaging as well as neuroelectrophysiological tests were not available. HIV and opportunistic infections were diagnoscd by standard serological and histopathological tests. Basic data is shown in table1.



Patient 15, 33 years, cared for by her sister in Waibegi Specialist Hospital, Yangon

Case	Sex	Age	Mode of transmission
1	male	49	IVDU
2	male	45	heterosexual
3	male	28	IVDU
4	male	34	heterosexual
5	male	36	heterosexual
6	male	32	IVDU
7	male	37	heterosexual
8	male	24	IVDU
9	male	29	heterosexual
10	female	30	heterosexual
11	male	26	IVDU
12	male	27	IVDU
13	male	30	heterosexual
14	male	25	heterosexual
15	female	33	heterosexual

To care is a duty - to prevent is a responsibility.

We have seen, that lack of modern medical support is the major reason for high morbidity and mortality among AIDS patients in Myanmar. But we also have learned, how the Buddhist society of Myanmar deals with their sick and dying.

Prevention and care are the twin engines that should drive our efforts for the containment of AIDS. It is the balance mix of caring and prevention that the world needs today.

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