Progressive Multifocal Leukoencephalopathy

Progressive multifocal leukoencephalopathy (PML) is an infrequent disorder of the nervous system. It primarily affects individuals with suppressed immune systems. This includes allograft recipients such as:

- Kidney transplant patients.
- Patients with cancers such as leukemia or lymphoma.
- Nearly 10% of patients with acquired immune deficiency syndrome (AIDS).

The disorder is caused by a common human polyomavirus. This is called the JC virus. It causes demyelination or destruction of the myelin sheath that covers nerve cells. The myelin sheath is a fatty covering. It acts as an insulator on nerve fibers in the brain.

SYMPTOMS

Symptoms of PML include:

- Mental deterioration.
- Vision loss.
- Speech disturbances.
- Inability to coordinate movements (*ataxia*).
- Paralysis.
- Coma, reflecting the multifocal distribution of brain lesions.
- Seizures. (These rarely occur.)

TREATMENT

There is no cure for PML. Currently, there is no effective treatment for the disorder. Treatment is symptomatic and supportive.

WHAT WILL HAPPEN

The course of PML is relentlessly progressive. Death usually occurs between 1 and 4 months after onset. But there have been a number of reported cases with survival for months to years.

RESEARCH BEING DONE

The NINDS supports research on demyelinating disorders of the nervous system such as PML. It is aimed at:

- Increasing scientific understanding of these disorders.
- Finding ways to prevent, treat, and cure the disease.

Using state of the art molecular diagnostic techniques helps to advance the research.

Research is continually being done to learn more about this problem.

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