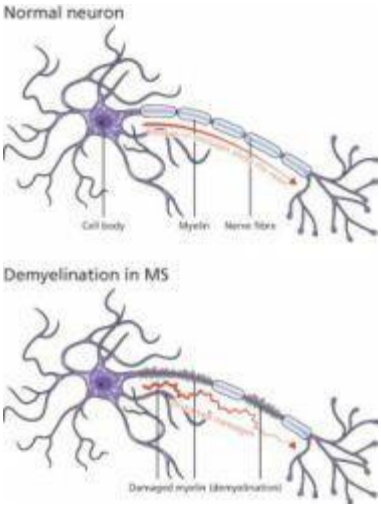
Acute disseminated encephalomyelitis (ADEM)



Acute disseminated encephalomyelitis (ADEM) is a rare inflammatory condition that affects the brain and spinal cord. It often follows on from a minor infection such as a cold and is the result of the immune system becoming misprogrammed and activating immune cells to attack the healthy myelin (a fatty protective coating) covering the nerves.

What are the symptoms of ADEM?

ADEM usually comes on quite quickly over hours to days. Symptoms may include nausea and vomiting, headache, irritability and sleepiness, unsteadiness or inability to walk, problems with vision, weakness or tingling in certain areas of the body. In severe cases seizures can result. The symptoms depend on where in the brain or spinal cord the inflammation and swelling are occurring.

How is ADEM diagnosed?

ADEM can be difficult to diagnose and often needs specialist tests. It is also important for the doctors to consider other possible causes of inflammation and infection in a similar way. To exclude these conditions, bloods tests and a lumbar puncture may need to be carried out. A lumbar puncture involves taking a tiny amount of cerebrospinal fluid (the fluid which surrounds the brain and spine) from the bottom of the spine. This is to check for the presence of particular proteins that might indicate inflammation.

An MRI scan of the brain (and sometimes the spine) will be the most helpful in making the diagnosis of ADEM. An MRI scan uses a magnetic field to take pictures of the brain and spine. It will enable the doctor to see whether the myelin around the brain and spinal cord has been damaged. Sometimes a dye (contrast) will need to be given intravenously (into a vein using a needle) during the scan, to help see the areas involved more clearly.

Treatment for other causes, such as brain infection (encephalitis), may be started before this is done.

How is ADEM treated?

Corticosteroid treatment can help reduce some symptoms and may stop new symptoms from developing. Once the diagnosis is made, corticosteroids are usually given into a vein once a day for the next three to five days. Most people start to get better quickly and make a full recovery. If there is no sign of improvement within a few days, other treatments may need to be considered.

For most patients, ADEM affects all ages but is particularly prevenient among children and young people, recovery begins within days and continues for up to one year. Some, however, continue to have symptoms such as blurred vision, weakness or numbness. Once the team overseeing the patient's care feels that the time is right, the patient will be discharged home. If there are no new concerns, your neurologist will continue ongoing care. Experts in the field suggest that any routine vaccination for children be delayed if possible for at least six months after the ADEM attack, but clearly this needs to be balanced against the risks of being unvaccinated.

Is it possible for ADEM to lead to the development of multiple sclerosis (MS)?

ADEM and MS are both conditions caused by the body's immune system becoming misprogrammed and attacking the myelin covering of the central nervous system. A small number of patients with ADEM will go on and develop further attacks of demyelination and possibly MS. However, the typical features seen in ADEM of sleepiness, irritability and fever are uncommon in a first attack of MS. Your doctor will be able to discuss this further with you based on the patient's specific symptoms and MRI findings.

What is the outlook for ADEM patients?

ADEM usually only occurs once, sometimes twice. Multiple attacks are very rare so may require further tests and discussion to confirm the diagnosis.

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