

## Viral encephalitis

The term 'meningo-encephalitis' is used to describe a spectrum of central nervous system diseases that can be caused by a variety of viral agents. With bacterial infections, meningitis tends to predominate. In viral infections, however, there is usually involvement of the brain or spinal cord to a greater or lesser degree. The most common causes of viral encephalitis in the UK include mumps, chicken pox (where cerebellar signs predominate), and the echo and coxsackie viruses. When the usual clinical picture of fever and constant headache, progressing sometimes to clouding of consciousness and/or unusual behaviour is present herpes simplex virus must also be considered and should be promptly treated with acyclovir. For this reason, if for no other, when encephalitis is suspected, hospital investigations are normally required.

When the features of encephalitis occur in someone who has recently returned from overseas other causes must be considered. Rabies may present up to several months after exposure either acutely or insidiously with initially only minor neurological abnormalities. Poliomyelitis must also be considered, especially in those known to be unimmunized. Insect borne viruses have recently gained publicity because of the outbreak of St Louis encephalitis in Florida, USA. This is a mosquito borne disease that occurs annually on the west coast of the USA, although this year's outbreak appears to have been larger than usual. There are no special clinical features that distinguish this type of encephalitis from the many other causes. The illness ranges from a few days of fever and headache to long term or permanent neurological damage or even death. Japanese B encephalitis is similar in that it is spread by mosquitoes. It occurs throughout Asia, causing both sporadic cases and outbreaks. Annual epidemics are seen in some regions, such as the low lying areas of eastern Nepal, parts of India and northern Thailand. There is a tick borne viral encephalitis that is prevalent in eastern Europe, including the Bavarian regions of Germany and Austria. This has caused sufficient concern to result in routine immunization of children in some areas. In the UK, the occasional case of loupingill is seen and is contracted via ticks that transmit the infection from the usual reservoir in sheep. Very few of these infections are treatable with anti-viral drugs, therefore prevention is important. Risk groups such as

travellers to Asia and America and farmers or treckers in Europe should be aware of the problem and attempts should be made to avoid bites from the known vectors. For those whose lifestyle and duration of exposure means they are going to be at risk, vaccines are available for European tick borne and Japanese B encephalitis. An effective safe vaccine against rabies is available but this is normally only advised for those who will be staying far from a source of supply since prompt vaccination after exposure appears to be effective.

## Presenting features of HIV infection

It may be timely to reconsider the ways in which advanced human immunodeficiency virus (HIV) infection causes symptoms. Cases in the heterosexual community are now being recognized in increasing numbers. These patients and their doctors may not immediately consider HIV infection as the underlying cause of their illness. In those who are not on prophylaxis, which can only be instituted in the asymptomatic when HIV infection has been confirmed, pneumocystis pneumonia remains the most common serious presenting illness. It usually develops over one or two weeks with fever and an unproductive cough. Chest signs are rarely present early in the illness but shortness of breath on exertion may occur. Persistent candidiasis especially of the mouth and gastrointestinal tracts should raise suspicions, especially where oesophageal or rectal involvement is found. Cerebral toxoplasmosis can cause an acute febrile illness with disturbed conscious level and localizing neurological features. However, the onset may be insidious, presenting for example with convulsions. Cytomegalovirus infection is less frequently the first opportunistic infection to occur but symptoms can be diverse, ranging from retinitis, pneumonia or chronic diarrhoea to ill-defined mildly febrile illness with lassitude and perhaps weight loss. Another early presentation can be dementia and, especially when this occurs in younger age groups, HIV infection must be considered as a possible cause. Other presenting illnesses include fungal infection of the skin that may be widespread, recurrent or persistent and Kaposi's sarcoma which may present with small slow growing lesions or be widespread and rapidly progressive.

When any of these illnesses present it

is rarely necessary to rush into HIV testing since this makes little immediate difference to the management. The illnesses should be investigated in their own right by appropriate diagnostic methods and by referral to appropriate specialist units. Thought can then be given to HIV testing after discussion and counselling.

## Use of immunoglobulins

Perhaps the most frequent reason for giving normal pooled immunoglobulin is to prevent hepatitis A in those travelling to endemic areas. It may be forgotten, however, that a variety of virus specific immunoglobulins are available, usually manufactured from the blood of those recently immunized or recently recovered from infection. They all can give the immediate protection which is not possible with active vaccination.

*Tetanus immunoglobulin* should be used in the management of soiled contaminated wounds in those who have not previously received tetanus toxoid.

*Hepatitis B immunoglobulin* is available for the unimmunized who have received contaminated needle injuries or been exposed under risky circumstances to infected blood.

*Varicella immunoglobulin* is available for the immunocompromised or pregnant women who have been exposed to a case and have no definite previous history of chicken pox.

*Measles immunoglobulin* is available to help control outbreaks in institutions and to prevent febrile convulsions in those predisposed and who are receiving vaccination.

*Rabies immunoglobulin* is available for those who have received a suspect bite and have not been actively immunized.

Most of these products are available from the blood transfusion services. They may be in short supply and whether or not to administer them can be discussed directly with medical staff at the transfusion services or after consultation with an infectious diseases specialist.

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