Japanese encephalitis

Japanese encephalitis (JE) is an infectious brain disease that occurs in some parts of Asia and Australia. JE virus is the most common cause of encephalitis in Asia.

Etiology and epidemiology

JEV belongs to the group of viruses called arboviruses. JEV is a RNA virus belonging to the **Flavivirus** group. The reservoir is represented by wild birds, as well as pigs. Rarely, a person may be infected via asymptomatic virus carriers. Mosquitos are the carriers, due to their typical occurrence in around bodies of water and rice fields. The disease is also common in agricultural areas.

Incidence is 1.8 / 100,000 inhabitants in endemic areas.[1]

Clinical picture

The disease varies in severity from inapparent to severe encephalitis. In 90% of cases, the infection takes place without any clinical signs, but more difficult course is expected for tourists in the given areas. The disease can progress to severe encephalitis. After a 5-15 days incubation period[2], the manifestations such as fever, chills, headache, and joint pain will occur. Patients become fatigued and we observe changes in consciousness (delirium to unconsciousness). The disease can have a prolonged course. Residual neurological, intellectual, or physical disabilities are observed in 30% of patients who experience severe encephalitis.

Diagnostics

To detect an infection, we determine **JEV-specific IgM antibodies** in cerebrospinal fluid or serum, preferably using PCR diagnostics. Analysis of cerebrospinal fluid reveals the typical clinical picture of aseptic meningitis and a blood count informs us of leukocytosis.

Treatment and prevention

Treatment is symptomatic and patients with encephalitis must be hospitalized in intensive care units (ICU).

An inactivated and live attenuated vaccine are available. In certain Asian countries, preventive vaccination is provided already in childhood. In the Czech Republic, vaccines are available in vaccination centers. Vaccination is usually recommended for those, who travel to endemic areas and will be staying in rural areas as well.

Links

References

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Citations

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