Lecture 13: 15 January 2023 Other RNA viruses. Part 3

Filoviridae

Negative sense, single-stranded RNA, enveloped viruses that replicate in the cytoplasm. Filamentous in shape

Ebola virus: causes severe hemorrhagic fever mainly in Africa. Mortality rate is high. Transmitted by respiratory droplets and direct contact. Vaccines are available. Diagnosis by PCR.

Rhabdoviridae

Negative sense, single-stranded RNA, enveloped viruses that replicate in the cytoplasm. Bulletshaped (تُشبه الرصاصة)

(الفيروس المسبب للسعار أو داء الكلب) Rabies virus

After bite of a rabid animal (حيوان مسعور مثل الكلاب أو الخفافيش أو الثعالب أو الذئاب أو الراكوون أو الجرذان), rabies virus multiplies in muscle or connective tissue at the site of inoculation and then enters peripheral nerves at neuromuscular junctions and spreads up the nerves to the central

nervous system causing progressive encephalitis.

Once in the central nervous system, rabies virus is fatal (death rate = 100%).

Management: passive immunization to neutralize the virus with vaccination.

(الفيروسات التي تنتقل عبر الحشرات) Arboviruses Arthropod-borne viruses

Flaviviridae

Positive sense, single-stranded RNA, enveloped viruses that replicate in the cytoplasm.

- 1. Dengue virus: Dengue (breakbone fever) is a mosquito-borne infection characterized by fever, severe headache, muscle and joint pain, nausea and vomiting, eye pain, and rash. It is the most common arbovirus infection worldwide.
- 2. Yellow fever: causes hepatitis and is transmitted by mosquitoes.
- 3. West Nile fever: can cause meningitis. A majority of infections are asymptomatic. It is transmitted by mosquitoes.
- 4. Zika fever: can cause microcephaly if transmitted from the mother to the child. The virus is transmitted by mosquitoes.

ليس مطلوباً للامتحان (الأشهر هو جنون البقر) Prion disease

The proposed cause is a proteinaceous material that does not have nucleic acid. The disease in relation of consumption of infected cows: variant Creutzfeldt Jakob disease (vCJD).