RNA-enveloped viruses include Rhabdo viruses Family, which include important properties.

Rabies virus cause Rabies

Medical important
Virus in this Family
In Rabies v.

Virus contain RNA-dependent
RNA polymerase

SS-RNA - polarity

Bullet-shape Capside

surrounding by lipoprotein envelope

virus isolated from called

street v.

has Broad host range

Infect all mammals

Whereas that passages In Rabbit brains is called

Fixed v.

Use in original Pasteur Type of the vaccine

In Rabies v., has Broad host range. Virus contain RNA-dependent RNA polymerase. 

Virus isolated from called street v. Therefore, Rabies virus cause Rabies. Medical important Virus in this Family In Rabies v. 

Important properties include SS-RNA - polarity, Bullet-shape Capside, surrounding by lipoprotein envelope. 

Infect all mammals, whereas that passages In Rabbit brains is called Fixed v. Use in original Pasteur Type of the vaccine.
Transmission and epidemiology

Virus transmitted by rabid animal

- dog
- cat

with aberrant behavior by viral replication

Bite

remaining healthy

Incubation period varies

According to

- Location of the bite by the dog or cat or bat between 2 weeks - 16 weeks (4 month) or Longer
- short i.p when bite on the head rather than Legs because the virus has shorter Distance to travel to reach to CNS

Clinically the patients exhibit

Prodromal non specific symptom

e.g.

- Fever
- anorexia
- changes in sensation at Bite sit

Within Few day

- Signs of confusion
- Lethargy
- increase salivation discharg

Then
Most notable characteristic Signs

- Painful spasm of throat muscles or painful swallowing
  - result in Hydrophobia

- Seizures
- Paralysis
- Coma

Within several day disease progress to

In human

- Rabid dx in animals by examination of Brain tissue by either

Lab.ox

Death occur but

By using support system Few individual can survived

Histological staining to see Negri bodies in the cytoplasm of hippo cample neurons

Isolation of virus on tissue culture but this take long time

IFT

On histological smear

3page
In human lab dx

Virus isolation  
- negri body can be demonstrated in
- serology

Treatment
- no antiviral therapy
- only supportive therapy is available

Coronial scrapes  
- autopsy specimen of Brain

Prevention of rabies

1. Pre exposure  
   - Immunization with rabies vaccine recommended to individuals in high risk groups by
     - HDC – vaccine (Human Diploid vaccine) which contain inactivated Fixed virus

2. Post-exposure
   - Duck embryo vaccine
     - Disadvantage: Has low immunogenicity
   - Never tissue culture vaccine
     - Advantage: causes allergic encephalitis as a result of cross reaction with human myelin

So HDV is preferred
Immunization by use of Vaccine

- Rabies immunoglobulin (Ig) obtaining from hyper immunized persons
- Immediate cleaning of wound

Decision to give post exposure immunization depends on the following factors:

1. Type of animal
2. Attack by domestic animal (dog, cat, animal)
3. Severity and location of the bits
4. Whether the rabies is endemic in the area

Dog/cat should vaccinate in trivially by live attenuated vaccine grown in chicken

Rabies
- the animal should be captured for 42 days
- To see any symptom develop
- Brain examined by IFT
Rhabdovirus – replication cycles

Virus attach to the Acetyl cholin receptor on the cell surface

Penetration

Uncoating

5 types of m RNAs are synthesized by RNA polymerase enzyme (early transcription)

m RNA code for viral protein

Virus RNA replication by viral encoded RNA polymerase

Late transcript and late translation to formation structural portion

Progeny virus RNA assembled within virion protein

Release by budding from cell membrane so virus acquired envelope from cell m.
Pathogenesis of Rhabdo virus.

Virus multiplies locally at the site of Bite → Infect the sensory neurons → Move by Axonal transport to the central N.S → Multiply in the CNS then Travels down to the peripheral Never

Notice. No viremic stage

Lab. d x : Neurons contain Negri body (eosinophilic I.B)

Salivary glands and other organs …… within CNS encephalitis develop – Neurons death – Demyelization