

# Rabies

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# Species: Rabies lyssavirus

## Genus: Lyssavirus



# Epidemiology

- Most feared zoonosis
- Transmitted by mammals
- NZ, Australia, UK are free from rabies
- In Sri Lanka dog bites is the commonest cause
- It is on the rise in Sri Lanka due to increased stray dog population
- Being an island and widespread road system, we have good chance to eradicate rabies

# Clinical features

- IP can be as short as 10 days or prolonged as 7 years
- But usually 1 – 3 months
- IP depends on the exposure
- Major exposures have a shorter IP
- IP is shorter in children

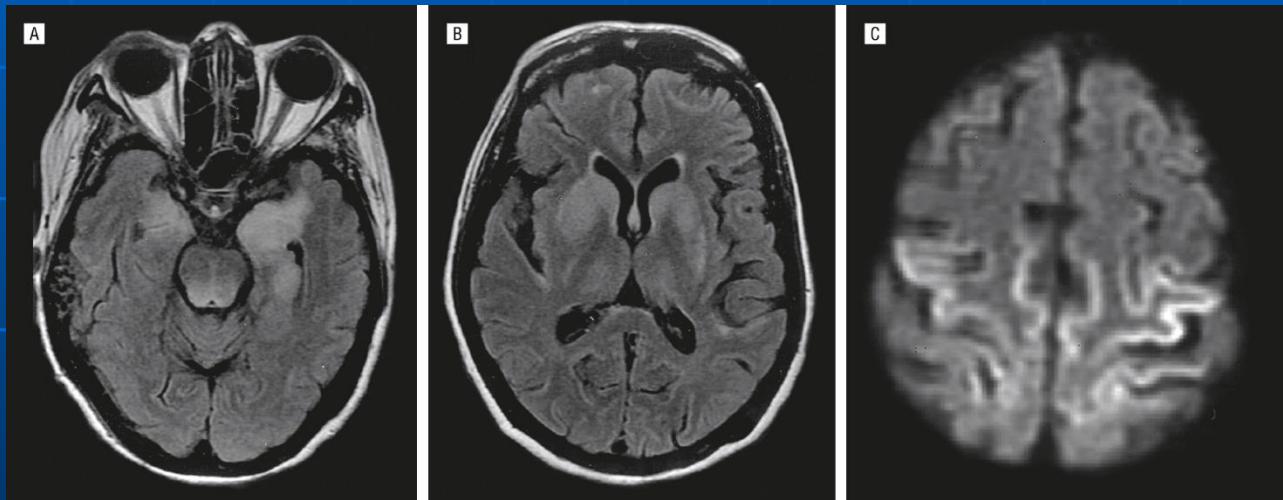
# Major exposure

- Single or multiple bites with bleeding
- On head, neck, face, chest, upper arm, hands, toes, genitalia
- Multiple deep scratches with bleeding on head, neck and face
- Single or multiple deep bites on any part of the body
- Contamination of mucus membranes with saliva
- Bites of wild animals with bleeding

# Minor exposure

- Single superficial bite or scratch with bleeding on the LL,UL, abdomen and back
- Nibbling uncovered skin
- Contamination of open wounds with saliva
- Single or multiple bites scratches without bleeding on any part of the body
- Drinking raw milk of a rabid cow

# pathophysiology



# Clinical features

- Prodromal period lasting 2 - 7 days
- Indefinite sensory changes may be felt at the bite site
- Low grade fever, malaise, headache, sore throat ,may occur at this stage
- Paresis and paralysis follows
- Muscle of deglutition are involved and swallowing become painful

# Clinical Features

- Any attempt to swallow will result in painful spasms of muscles of deglutition
- Hence the term Hydrophobia arise
- Increasing depression and anxiety become apparent and patient become withdrawn.
- Stage of excitement (furious Rabies) will follow with alternative periods of manic and calm

# Clinical features

## Aerophobia



# Clinical features

- Spasms in throat become violent patient will look fearful
- Fan sign
- Cranial nerve palsies occur
- Generalized convulsions
- Death occur by respiratory or cardiac arrest
- Less often progressive ascending paralysis occur

# Differential diagnosis

- Viral encephalitis
- Bulbar poliomyelitis
- Hysteria
- tetanus

# Treatment

- No cure
- Symptomatic treatment
- Hydration, anticonvulsants, sedatives
- Counselling for relatives

# Post exposure prophylaxis

- Local treatment of wound –wash with running water, and apply an anti viral agent
- Avoid suturing until ARG
- ARg – human, equine
- ARV – Duck embryo, Vero cell, human diploid

# ARV(major)

- If animal is healthy, observable and has had minimum of 2 rabies vaccine given not more than 2 years apart and last dose within 1 year observe the animal for 14 days
- If animal suspicious or sick start PEP and observe the animal. If animal healthy discontinue PEP after 14 days
- If animal rabid or unobservable start PEP

# ARV ( minor)

- If animal is healthy observable and has had minimum of 1 rabies vaccine within 1 year and the bite is one month after vaccine PET delayed

# PEP

Vaccination for active immunity

For major exposure

Deep IM D0, 3, 7, 14, 30

For minor exposure

D0- 2 doses, D7 and D21

# PEP

- For all major give ARG
- Human or equine
- If allergy to equine ARG and Human ARG not available
  - if animal is observable give 4 site ID
  - If animal suspicious give ARG in ICU under adrenalin and antihistamine

# ARG

- Given as early as possible
- Could be given up to 3 month after the exposure
- Infiltrate around the wound as much as possible and rest IM
- Give ARG before ARV

# Pre-exposure prophylaxis

- Given for lab staff or veterinary staff in endemic areas
- D0, 7, 28 and a booster at one year
- Additional booster every 5 years
- Not give ARG even with major exposure, 2 doses of ARV given D0 and D3