

A microscopic view of plant cells, showing a network of cell walls forming a honeycomb-like structure. The cells are filled with a light blue fluid, and the cell walls are darker blue. The background is a soft, out-of-focus blue.

• Sit DolorAmet

RABIES

Introduction

- It is a fatal disease caused by filtrable neurotropic virus present in the saliva of infected animals transmitted to man through their infected saliva.
- The Egyptians at the time of Pharaohs
- Mortality - 25000-30000 per year in India



RESERVOIRS & TRANSMITTERS-

- Wolves, foxes, racoons, skunks, jackals and other wild life carriers

VECTOR-

- Unimmunised domestic or street dogs and cats
- Vampire bat

SOURCE OF INFECTION

- Saliva of rabid animals

TRANSMISSION

- Inoculation of virus into humans via laden saliva during bite of rabid dog/ animal or Licking on abraded skin/ mucous membrane
- Inhalation/ rabies virus aerosol in bat infected caves can infect man
- Grafting of infected cornea

EPIDEMIOLOGICAL DETERMINANTS



VIROLOGY

Prototype of genus *Lyssavirus*
of *Rhabdoviridae* (family)

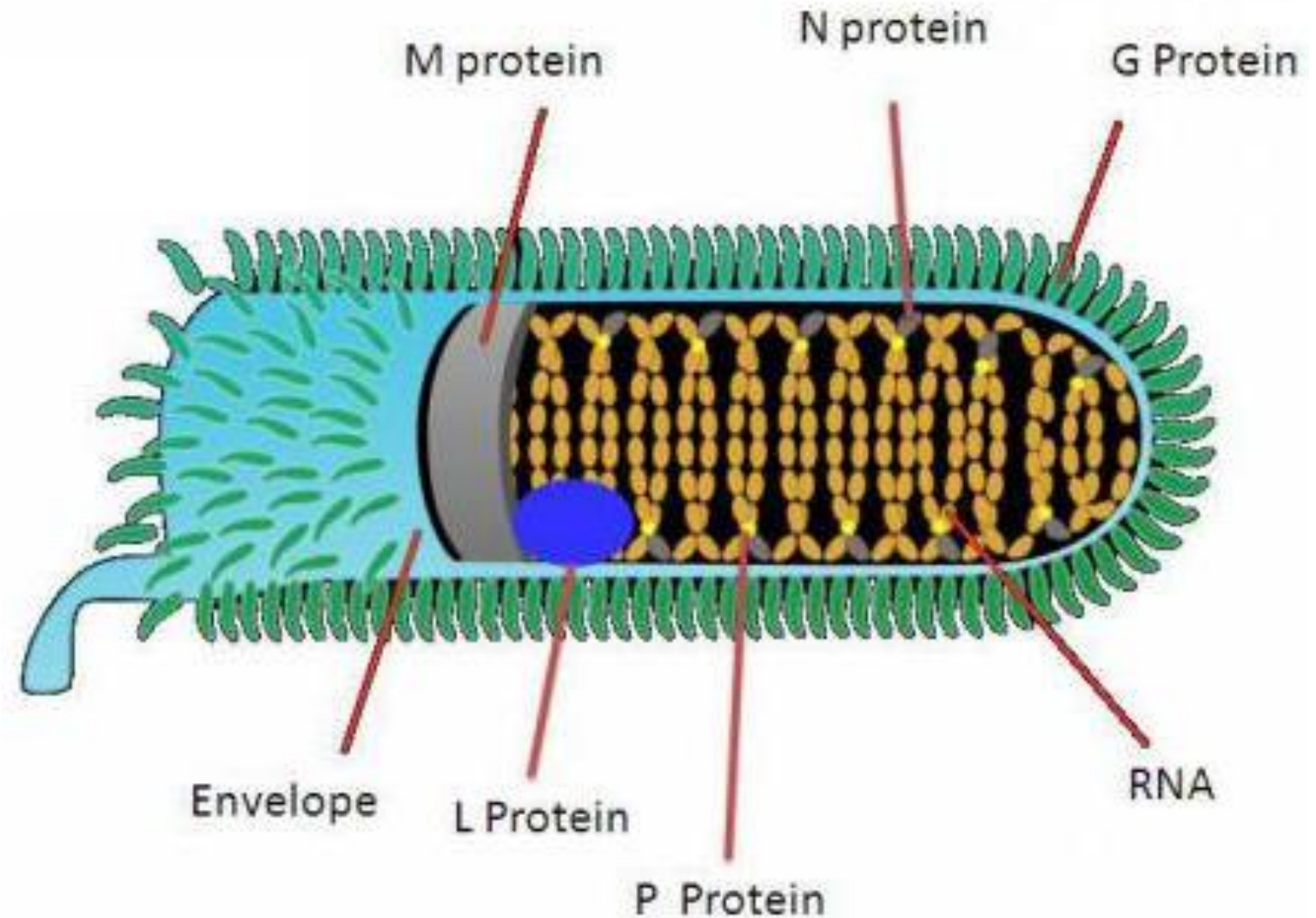
Found in mammals and
arthropods

Rapidly inactivated by heat

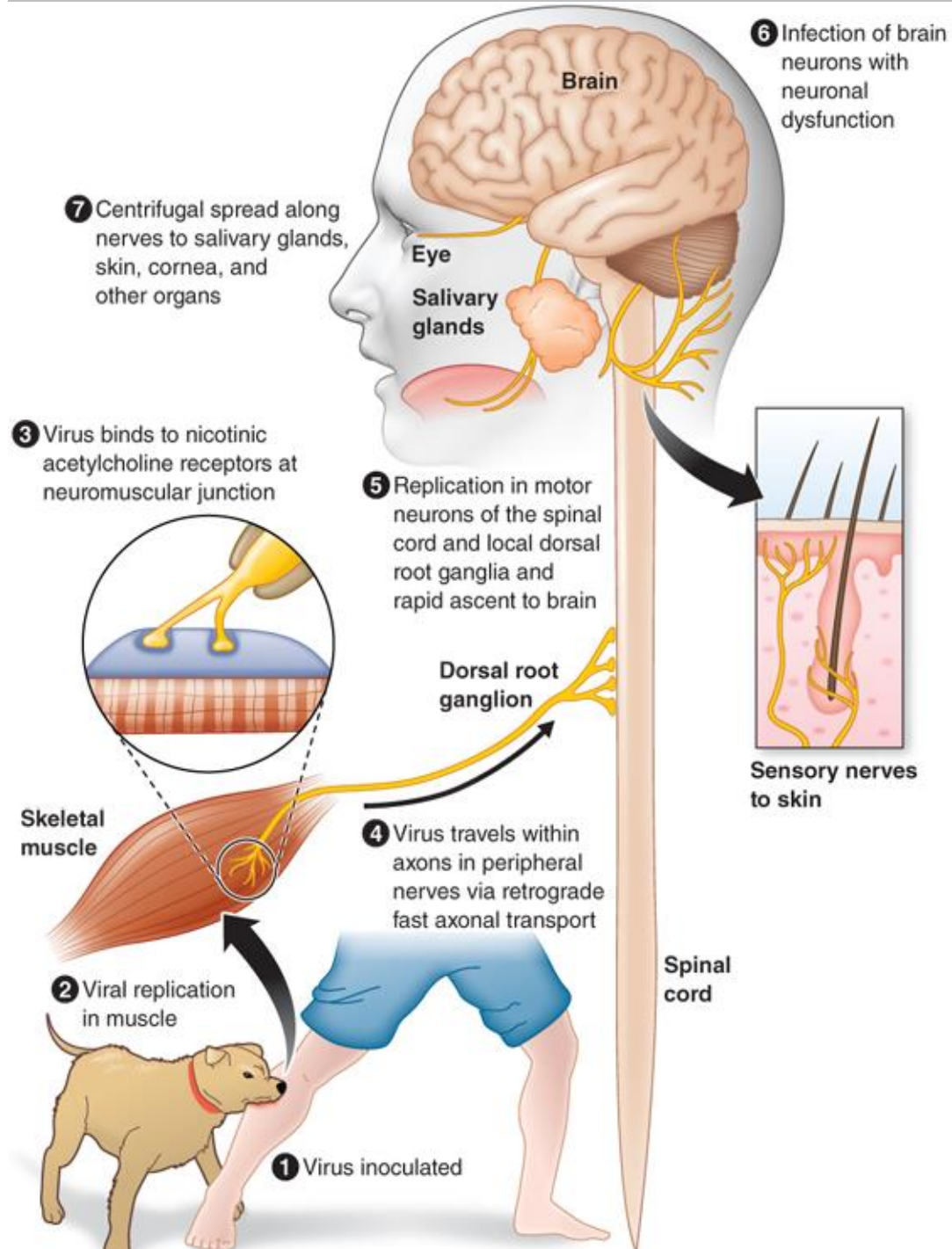
At 56 degree Celsius – half life <
1 min

Cannot enter through intact
skin

No evidence of human to
human transmission



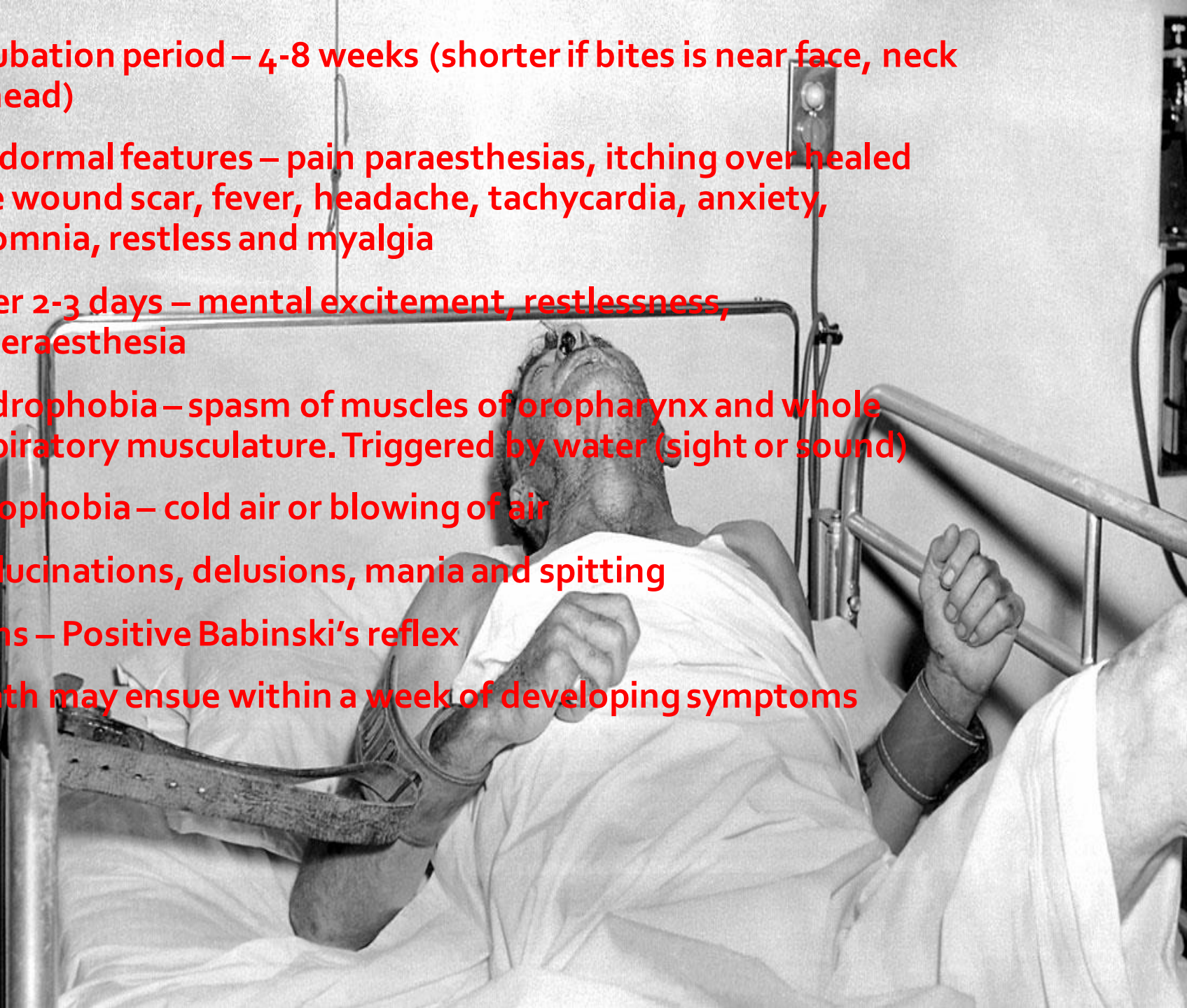
PATHOGENESIS



CLINICAL FEATURES

FURIOUS RABIES

- Incubation period – 4-8 weeks (shorter if bites is near face, neck or head)
- Prodromal features – pain paraesthesias, itching over healed bite wound scar, fever, headache, tachycardia, anxiety, insomnia, restless and myalgia
- After 2-3 days – mental excitement, restlessness, hyperaesthesia
- hydrophobia – spasm of muscles of oropharynx and whole respiratory musculature. Triggered by water (sight or sound)
- Aerophobia – cold air or blowing of air
- Hallucinations, delusions, mania and spitting
- Signs – Positive Babinski's reflex
- Death may ensue within a week of developing symptoms



CLINICAL FEATURES

PARALYTIC RABIES

- Commonly seen in vampire bat – transmitted rabies
- Similar to GB syndrome
- Paraplegia/ hemiplegia
- No excitement
- Tendon reflexes absent
- Fever and profuse sweating
- Later stage – paralysis may ascend to involve respiratory muscles



DIAGNOSIS

Virus culture – positive in 1st week (saliva, throat swab, eye swab and CSF)

Antigen detection – Fluorescent antibody test of skin biopsies, punch biopsy and Corneal smear test

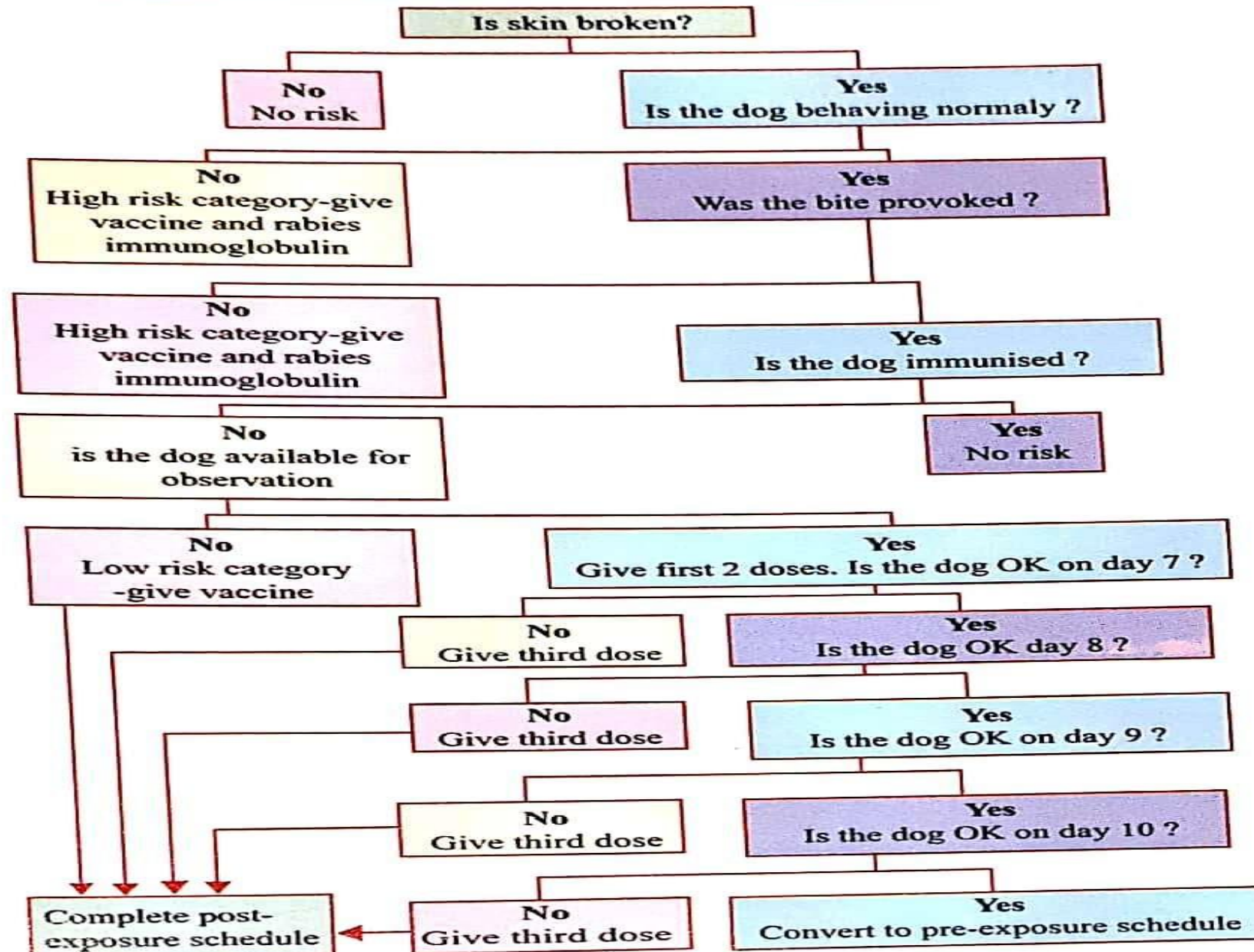
Antibody detection – Antirabies antibody in blood during 2nd week of unvaccinated patients

Negri body detection – Fluorescent antigen detected from animal's brain

TREATMENT

- Control seizures – Diazepam 10mg I/V 6th hourly
- Chlorpromazine 50 mg SOS to control seizures
- IV fluids and nutrition
- Airway and oxygenation
- Wound care – cleansing with soap and water immediately, irrigation with povidone Iodine 1% or 70% alcohol
- Tetanus toxoid
- Antibiotics

Figure 1 Management of rabies exposure



PROPHYLAXIS

Post exposure –

Day 1 - RIG (rabies immunoglobulin) + 1st dose of rabies vaccine

Day 3 – 2nd dose of rabies vaccine

Day 7 – 3rd dose of rabies vaccine

Day 14 – 4th dose of rabies vaccine

Day 28 – 5th dose of rabies vaccine

Human rabies immunoglobulin – 20 IU/kg – I/M in deltoid

Rabies vaccine – PCECV, PVRV, HDCV





THANK YOU!!!

- By Dr. Dattatrai More

Do you have any questions???