

Pharmacy Bulletin

Pharmacy Department, HCTM, PPUKM

Edition 17, Issue 6

Rabies: Post-Exposure Management

Recently in July 2017, Malaysia recorded its first rabies death after nearly 20 years since it was last reported in 1998. The 2 siblings were pronounced dead after their parents agreed to withdraw the life support. The third death, due to rabies encephalomyelitis occurred in a 7 year old girl who was bitten by a rabid dog. In total, 5 deaths all due to dog bite, has occurred since it was first reported. To date, CDC (Centers for Control & Disease Prevention) has declared 3 areas in Sarawak (Serian, Sri Aman & Kuching) as "rabies infected area".

Effective treatment as soon as possible after exposure can **prevent the onset of symptoms and death.**

Post-exposure prevention (PEP) consists of:

- Local treatment of the wound
- Immediate vaccination
- Administration of rabies immunoglobulin (RIG) (if indicated)



Risk category	Type of exposure	Action to be taken
1	Touching/feeding animal Licking of intact skin	Nil if history is reliable If history not reliable, treat as category 2
2	Nibbling of uncovered skin. Superficial scratch, no bleeding. Licking of broken skin.	Apply wound treatment. Administer vaccine. Do not administer anti-rabies immunoglobulin. Stop vaccination if animal is rabies negative in laboratory tests, or remains healthy after 10 -14 days observation (dog or cat). Continue vaccination if animal is not found/captured.
3	Bites/scratches which penetrate the skin and draw blood. Licking mucous membrane. Multiple bites. Any wild animal bites	Apply wound treatment. Administer vaccine. Administer anti-rabies immunoglobulin. Administer anti-tetanus and antibiotic treatment if wound is dirty. Stop vaccination if animal is rabies negative in laboratory tests, or remains healthy after 10 - 14 days observation (dog or cat). Continue vaccination if animal is not found/captured.

1. Local treatment of the wound

Remove the rabies virus at the site of infection by:
Immediate and thorough flushing and washing of the wound for a minimum of 15 minutes with soap and water, detergent, povidone iodine or other substance to kill the virus

2. Post exposure vaccine

Recommended for individuals who had contact with animal (eg bites or abrasions) believed may be or proven to be rabid

Vaccine available in Malaysia: **Verorab (0.5mL)** by Sanofi Pasteur, currently available in HSAJB, HTAR, HKL and UMMC

Previously unvaccinated people

- 4 doses at day 0, 3, 7, and 14.
- In addition to rabies vaccine, they should also receive a dose of RIG at the same time as the first dose of the vaccine to provide rapid protection that persists until the vaccine works.

Previously vaccinated people

- 2 doses at day 0 & 3
- RIG is unnecessary and should not be given.

Immunocompromised patient

- 5 doses at day 0, 3, 7, 14 and 28.
- In addition to rabies vaccine, they should also receive a dose of RIG at the same time as the first dose of the vaccine to provide rapid protection that persists until the vaccine works.

3. Rabies Immunoglobulin (RIG)

Type of RIG: **Equine RIG** dose: **40IU/kg**

Should be **given with the 1st dose** of vaccine to provide immediate antibodies until the body can respond to the vaccine by actively producing antibodies of its own

If possible, the full dose should be infiltrated around any wound(s) and any remaining volume should be administered IM at an anatomical site distant from vaccine administration

Alert!

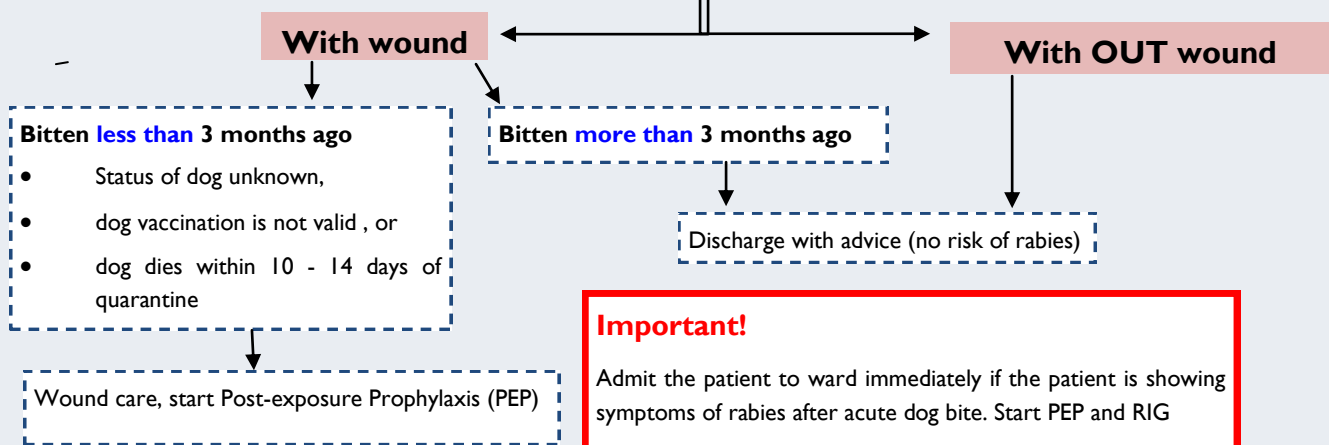
- RIG **should not be** administered in the **same syringe** as vaccine
- Do not exceed recommended dose because RIG might partially suppress active production of antibodies.

What if no RIG available?

Administration of RIG can be **delayed up to 7 days post 1st vaccination**. RIG is **not recommended** after 7th day since an antibody response to the vaccine is presumed to have occurred.

So far, no RIG being prescribed in Kuala Lumpur area since patient only came in with risk category 1 and 2 (JKN KL).

What if it is an **OLD** dog bite case?



Important!

Admit the patient to ward immediately if the patient is showing symptoms of rabies after acute dog bite. Start PEP and RIG

What if the patient is asymptomatic after an acute dog bite?

Discharge the patient with Patient Home Alert Card and Rabies Vaccination Card.

Continue PEP if dog positive for rabies

Where to vaccinate?

Adult : IM at deltoid area

Children: IM at anterolateral aspect of thigh

Where to administer RIG?

IM at an anatomical site distant from vaccine administration

CLINICAL MANIFESTATIONS

Incubation period is typically **1-3 months**, but may vary from <1 week to more than 1 year.

Initial symptoms: fever, often pain or an unusual/unexplained tingling, burning sensation at wound site.

As virus spread to CNS: Progressive, fatal inflammation of brain and spinal cord

Two forms of rabies:

1. **Furious rabies**: hyperactivity, excited behaviour, hydrophobia, sometimes aerophobia
2. **Paralytic rabies** (30% of total case, less dramatic and usually longer): paralyzed muscle, starting at the site of bite, develops into coma and eventually death.

Reference: Interim Guideline for Human Rabies Prevention & Control in Malaysia, Disease Control Division, Ministry of Health Malaysia

Article contribution by PRP Hafiza

EDITORS :

IZYAN DIYANA IBRAHIM

izyandi@ppukm.ukm.edu.my
03-91455415

MICHELLE TAN HWEE PHENG

hptan@ppukm.ukm.edu.my
03-91455401

PDF version available in

<http://www.ppukm.ukm.my/farmasi/>

PPUKM Formulary is now available in



- **Google Play Store** ("Drug Formulary DIY-Formularies")
- **ios Apple Store** ("PPUKM Formulary")