

ALLERGY

Definition: State of hypersensitivity due to Ag-

AB reaction varies in its degree from **local** reaction "edema or erythema" to **febrile**

condition "fever" **to anaphylactic shock**.

ALLERGY

- ◆ Pathogenesis: Ag + T Lymphocytes → release Soluble
 mediator → stimulate B Lymphocytes → activate
 Lymphokinase and activating factors which lead to:
- 1. Infiltration of monocytes and lymphocytes within the site of injection.
- 2. Inhibit movement of macrophages out from the site of injection so lead to edema in dermis and epidermis.
- 3. Increase body temperature
- 4. Histamine release and shock

<u>Mallein Test</u> Burkholderia mallei

Definition: Allergic field test used for diagnosis of Glanders

Indications:

- 1. Differential diagnosis of suspected cases of **Glanders** .
- 2. Base for control and eradication program of **Glanders**.
- 3. In case of **newly** introduced animal.

1- Intradermo-palpebral

Sensitive reliable and specific and displaced both ophthalmic

and subcutaneous tests.

- **Dose:** 0.1 ml concentrated PPD
- **Site:** Lower eye lid intradermally in one eye and leave other control
- **Result:** after 1:2 days
- **Positive:** edematous swelling in eye lid– purulent discharge eye nearly closed
- Negative: no change occur
- **Doubtful:** little swelling in lower eye lid serous discharge so in this case repeat test after 1 or 2 months

1- Intradermo-palpebral

Sensitive reliable and specific and displaced both ophthalmic and subcutaneous tests.

- Advantages:
- 1. Not need to keep animal out of work
- 2. Not need to keep animal in door
- Disadvantages:
- 1. 5 % false negative

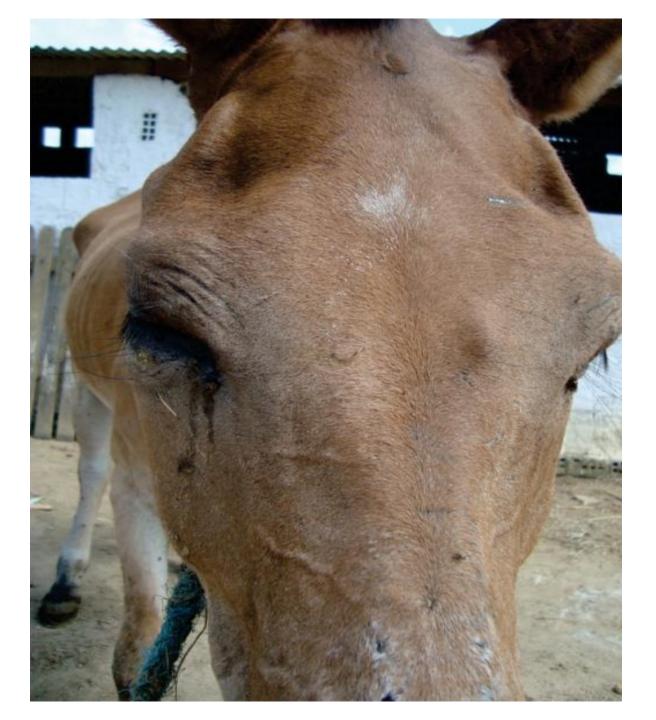


2- Subcutanous Mallein

- **Precaution:** animal should be of normal body temperature 1 day before injection and 9, 12, 15 hours after injection
- **Dose:** 2.5 ml dilute PPD
- **Route & Site:** in one side of neck **S/C**.
- **Result:** after 1 day
- **Positive:** increase body temperature **1:1.5**°C and firm edematous swelling in site of injection
- Negative: no change occur
- **Disadvantages:** interferes with subsequent serological test

3- Ophthalmic Mallein

- **Dose:** 0.2 ml dilute PPD
- **Route & Site:** in conjunctival sac of one eye and leave other eye control.
- **Result:** after 12 hours
- Positive: edematous swelling in upper and lower
 eye lid discharges edema at side of face –
 panophthalmitis.
- Negative: no change occur



VACCINE

Suspension of live attenuated and / or

inactivated or killed microorganism or its

products "Toxoid" given to animal routinely

for prevention and control of infectious

diseases.

Vaccine vs Antiserum

Items	Vaccine	Antiserum
Component	Antigen	Antibodies
Use	Prophylaxis	Treatment & Prophylaxis
Type of immunity	Active	Passive
Period of immunity	6 Months or more	Not exceed 3 weeks
Mode of action	Stimulate Antibodies production	Ready made antibodies

Types

- 1) Live attenuated.
- 2) In-activated or killed.
- 3) Toxoid.
- 4) Sero-vaccination.
- 5) Auto-vaccination.
- 6) Subunit vaccine
- 7) Recombinant vaccine

1. Live attenuated vaccine

- Definition: Vaccine prepared from live m.o with attenuation to loss their virulence but retained its ability to induce protective immunity.
- **Duration and repetition:** 1 y and repeated annually.
- Advantages: Long term immunity
- Disadvantages:
- Used in endemic area only not in free or exotic.
- Not used in insect born diseases (virulence reversion).
- Sever post-vaccinal reaction.

2. Inactivated or killed

- Definition: Vaccine prepared from inactivated virus or killed bact. with attenuation to loss their virulence but retained its ability to induce protective immunity.
- Duration and repetition: 6 months every 6 m.
- **Advantages:**
- Used in endemic and free or exotic area.
- Used in insect born diseases.
- No sever post-vaccinal reaction.
- Disadvantages: Short term immunity

3. Toxoid

Definition: Vaccine prepared from toxins of bacteria treated by heat or chemical to loss their toxogenisity but retained its ability to induce protective immunity.

4. Sero-vaccination

Definition: Using both antisera and vaccine together in the same time by 2 separate syringes (rapid protection).

5. Auto-vaccination

Definition: Vaccine prepared from m.o isolated from the lesion of the animal to vaccinate healthy in-contact animal (or the same animal in emergency).

6. Sub-unit vaccine

Definition: Vaccine prepared from the protein.
 7. Recombinant vaccine

Definition: Vaccine prepared from nucleic acid coding the antigen.

Vaccination by inactivated vaccine should be followed by booster dose after 1 month.

Incase of insect born diseases, the susceptible animals should be vaccinated 2 months before insect breeding season.

Failure of vaccination

1) Host factors.

2) Human factors.

3) Vaccinal factors.

1. Host factors

1. Very young animal (Incomplete developed immune system)

- 2. Very old animal (exhausted immune system).
- **3.** Maternal antibody interference (neutralization)
- 4. Exposure to stress factor (cold, hot, transport ...)
- 5. Vaccination during the I.P of the disease (overload

on immune system).

2. Human factors

1. Improper handling or bad storage of the vaccine

4-8 C.

- 2. Improper mixing the vaccine before using.
- **3.** Exposure the vaccine to direct sunlight.
- 4. Too frequent administration of the vaccine with

short interval (exhausted immune system).

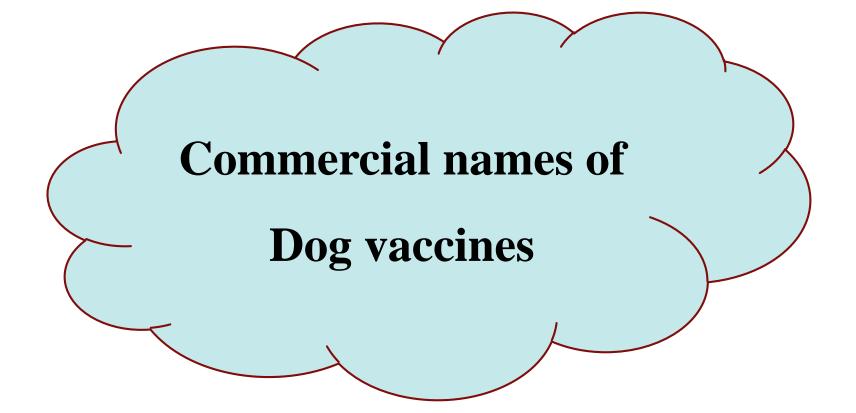
5. Use tap water in dissolving the vaccine (chlorine)

3. vaccinal factors

- 1. Vaccine prepared from wrong m.o.
- 2. Excessive attenuation of the m.o.
- 3. Vaccine contain insufficient amount or volume

of antigen.

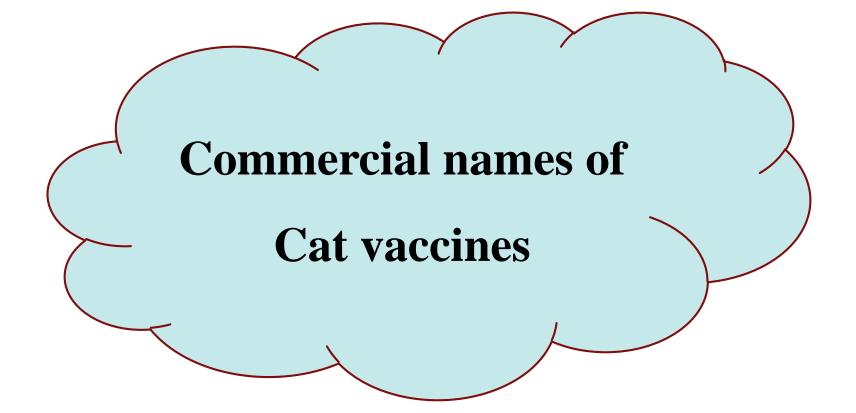
4. Unsatisfactory route and dose of the vaccine



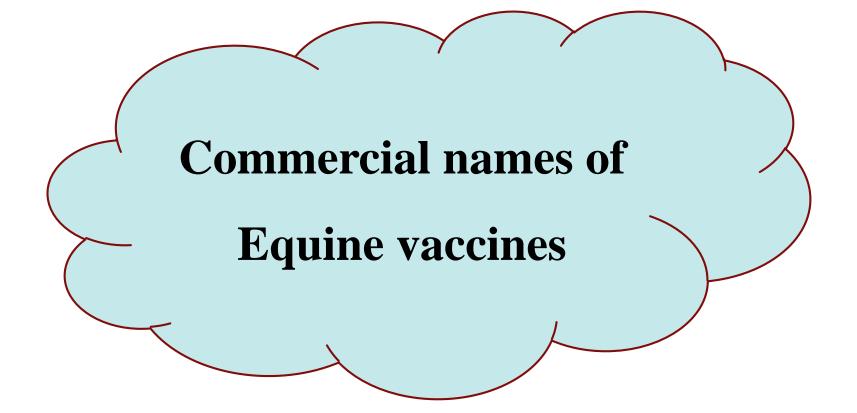
Commercial name	Туре	Dose & duration of vaccination
1.Canine Rabies Vaccine®	Inactivated	Time (Age) of Vaccination: 4-6 months of age
		Revaccination: annually
		Dose: 1 ml
Inactivated Rabies Var Na. 1-2011 Na. 6/2012 Na. 6/2012	Data and the second sec	Route: S/C - I/M

Commercial name	type	Dose & duration of vaccination
2- Defensor 3 ®	Inactivated Rabies vaccine	Time (Age) of Vaccination: 4-6 months of age Revaccination: after 1 year then every 3 years Dose: 1 ml in dogs and cats – 2 ml horse – donkey – camel) Route: SC or IM in dogs and cats – IM in other animals
3. Vanguard Plus 5/L & First Dose CV ® Canine crona virus	Live attenuated (CD – CPV – CAD – CPI) Killed (L. canicola – L. icterohaemo rrhagiae – CCV	Time (Age) of Vaccination: 45 days + booster dose after 2 weeks Revaccination: after 1 year from last dose then every year Dose: 1 ml (Vanguard plus 5/L dissolved by First Dose CV) Route: SC or IM

Commercial name	Туре	Dose & duration of vaccination
4-Canine Parvo viral Enteritis Vaccine® 5. Canine Distemper Vaccine®	Live attenuated	Time (Age) of Vaccination: 3 months of ageRevaccination: annually
Wind Rate Party of the Party of		Dose: 1 ml (Vial dissolved by diluent) Route: SC - IM



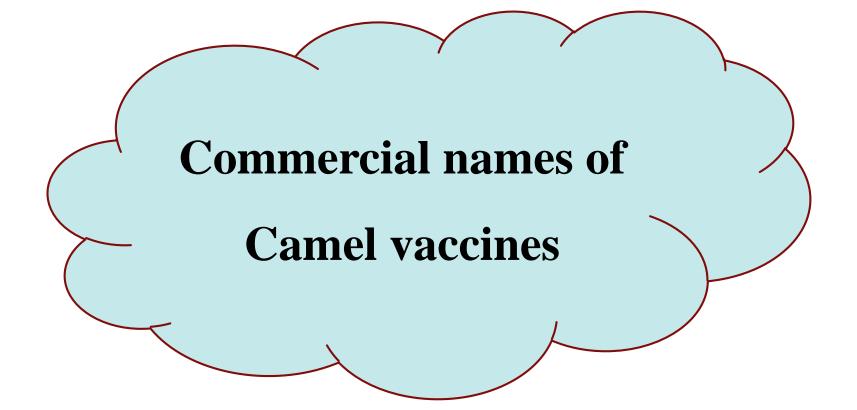
Commercial name	Туре	Dose & duration of vaccination
<section-header></section-header>	Live attenuated (FRV – FCV – FPV – Chlamydia psittaci) • Feline rhinotracheitis • Feline calci virus • Feline panleukopenia • chlamydia	<pre>Time (Age) of Vaccination:45 days + booster dose after 2 weeks Revaccination: annually Dose: 1 ml Route: S/C - I/M</pre>



Commercial name	Туре	Dose & duration of vaccination
1- Fluvac Innovator EHV4/1 [®]	Inactivated (El – EHV.1 – EHV.4)	Time (Age) of Vaccination: 4 months + booster dose after 4 weeks
Image: State Stat		Revaccination: after 1 year Dose: 1 ml Route: I/M

Commercial name	Туре	Dose & duration of vaccination
2. Equine Influenza ®	inactivated	Time (Age) of Foal from unvaccinated dam at 3-4 months of age Foal from vaccinated dam at 6-8 months of age
		Revaccination: 6 months
A JANE AND A SALE OF A SAL		Dose: 2-4 ml with 1-3 months interval
ALAS & C. A. C. RES. INST. CON		Route: S/C - I/M

Commercial name	Туре	Dose & duration of vaccination
3. Tetanus Antitoxin ®	Antiserum	Time (Age) of After injury – Before surgery
		Revaccination:
Marine Long 1/2016 1/2016 1/2016		Dose: 1500 – 3000 IU / Large animal 1000 – 1500 IU / Small Animal Route: S/C



Commercial name	Туре	Dose & duration of vaccination
Camel pox vaccine®	Live attenuated	Time (Age) of Calf from vaccinated dam at 6-8 months of age Calf from unvaccinated dam at 3-4 months of age
		Revaccination: annually
		Dose: 0.5 ml
Camel Pox Vace		Route: I/D

