

VIRAL HEMORRHAGIC DISEASE

VHD VIRAL HEMORRHAGIC SEPTICEMIA

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It is acute viral disease of mature or semi mature characterized by sudden onset, hemorrhagic nasal and vaginal discharge fever nervous signs and death.

VIRUS:

THDV is a small non enveloped DNA caliciviridae virus having hemagglutination character. The HA activity lost with freezing and thawing.

EPIDEMIOLOGY

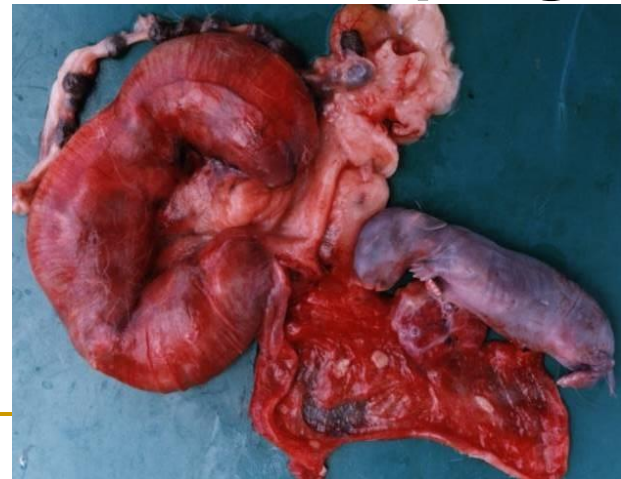
- ◆ **The disease affect rabbits over 8 weeks.**
- ◆ **Male rabbits are less susceptible thjan female.**
- ◆ **The affection occurred in fall and early sammer.**
- ◆ **Virus is stable in blood and meat for 9 months at 4°.**
- ◆ **Blood and liver of infected rabbits contain more than a million viral particles per gram.**
- ◆ **THD can introduce by Frozen meat, breeding stock or raw rabbit angora wool from endemic area.**
- ◆ **Rabbits are known to shed virus for at least 4 weeks after recovery from the disease.**

TRANSMISSION

- Direct contact with infected animals or, indirectly by contact with objects.
 - Aerosol is not important mean.
 - Natural infection is more orally.
 - Experimental can be induced by oral, nasal, subcutaneous, intramuscular, or intravenous routes .
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SIGNS:

ACUTE: Young adult and adult rabbits die suddenly after 6 to 24 hs of fever with few signs foamy hemorrhagic nasal discharge. Vaginal hemm. Abortion of pregnant doe.



abortion of pregnant

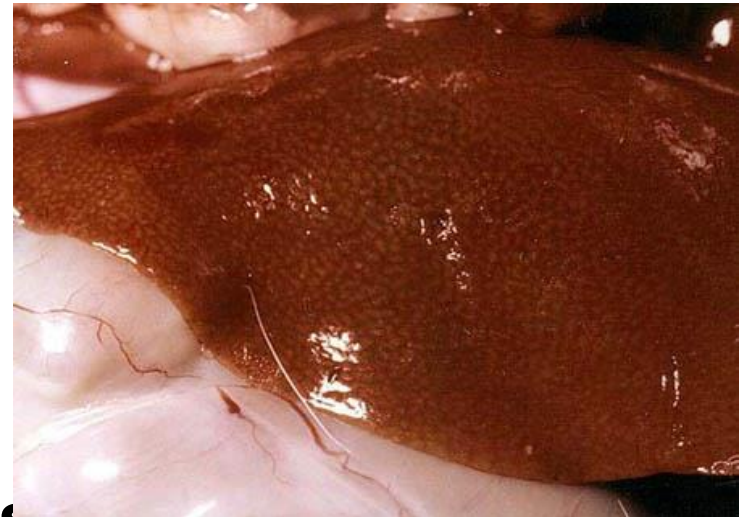
SUBACUTE

Fever (40.5° C) or no until rabbits show clinical signs. Depression and a variety of neurologic signs including excitement, convulsion incoordination, opisthotonos, and paddling. A few rabbits may have a terminal serosanguineous, foamy, nasal discharge, cry and death..

LESION

Many gross and histopathologic lesions have been attributed to VHD, including hemorrhages and necrosis in many organs. If extensive necrosis occurred liver is pale.

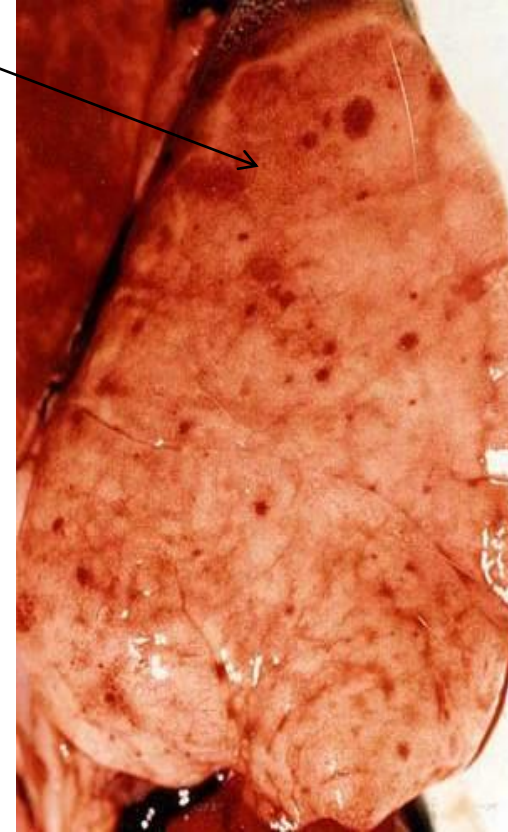
- ✓ Hepatic necrosis at portal zone .
- ✓ Hemorrhages are the
- ✓ most lesion with



Massive terminal intravascular blood coagulation in organs causing death.

LESION

- ✓ Hemorrhages in lungs trachea, and thymus
- ✓ Infarctions in kidneys and spleen.
- ✓ Infarcted kidneys may appear black.
- ✓ spleen is thickened black with
- ✓ rounded edges.
- ✓ Catarrhal enteritis due to small Intestine necrosis, diarrhea usually not present because rabbits die per acutely before digestive alterations develop .



Specimens for Laboratory

Unfixed liver, heparinized blood and serum, and fixed liver, spleen, kidney, lung, small intestine, and brain should be sent to the laboratory to confirm suspected cases .

DEFFERENTIAL DIADNOSIS

Acute pasteurellosis.

Pulmonary pasteurellosis (snuffles).

Acute coccidiosis.

Enterotoxaemia due to *E. coli* or *Clostridium perfringens* can cause such a hemorrhagic syndrome.

Oral administration of antibiotics to rabbit.

VACCINATION

Several vaccines have been developed and are used where VHD is endemic.

All of these vaccines are made from inactivated virus prepared from infected rabbit liver extracts. Vaccinated rabbits develop protective antibody in 5-10 days.

Breeder:

1st dose at 4 weeks, 2nd 8-10 weeks and must be revaccinated after 6 months.

Broiler:

A single dose at 4 weeks is protective.

Control and Eradication

- Restrict importation of rabbits, frozen rabbit carcasses, raw rabbit pelts, and angora wool from countries where VHD is endemic.
- VACCINATION should be considered if eradication is not possible or if the disease becomes endemic in susceptible populations .
- imported from countries where the disease is endemic is a particularly likely source of virus introduction



THANK YOU
