SPECIFIC DISEASES OF RABBITS

Diseases caused by bacteria

Pasteurellosis (Snuffles, pneumonia)

The Pasteurella species cause various diseases in rabbits. The most common organisms are Pasteurella haemolytica and Pasteurella multocida. *Pasteurella haemolytica* infection in rabbits is associated with chronic rhinitis (colds), pneumonia or death. *Pasteurella multocida* causes chronic rhinitis, colds, snuffles, pneumonia, peritonitis and septicemia.

Transmission: *Pasteurella organisms* are found in the environment and in mucous membranes of healthy animals particularly in the respiratory tract mucosa. There are some predisposing factors involved with susceptibility of Pasteurella infection in rabbits including avitaminosis, inadequate diet, poor husbandry and hygiene, fungal and parasitic infections. The most common source of infection is contact with other infected rabbits and usually, an animal is infected through the respiratory tract. The organism can also be spread from contaminated equipment and cages.

Antemortem findings:

Chronic rhinitis (Colds):

1. Sneezing
2. Clear, watery or thick-yellow nasal discharge
3. Soiled discoloured fur on the inner side of the front legs
4. Muzzle covered with discharge

Rabbits usually do not recover from this infection and may have periodic flare-ups of the cold. The colds may lead to classically described snuffles and further to pneumonia.

Snuffles (Contagious catarrh): This is a chronic and destructive form of cold in rabbits.

1. Frequent “snuffles” and forceful loud sneezing in rabbits
2. Mucoid to cream coloured purulent nasal discharge
3. Purulent conjunctivitis and cloudy eyes
4. Death due to weakness and secondary pneumonia or septicemic infection

Pneumonia:

1. Elevated temperature
2. Dullness and noisy forceful breathing
3. Bluish ears and eyes
4. Death anywhere from 12 hours to 4 days. The survivors may be stunted.

Peritonitis:

1. High temperature
2. Fast and shallow breathing
3. Reluctance to move due to sore abdomen

Septicemia:

1. A dead rabbit may be the first sign
2. Extreme weakness and high temperature
3. Difficult (heavy) breathing
4. Bluish discoloration of the ears and skin
5. Abortion in breeding does

Abscesses:

1. Abscesses on the neck, dewlaps, ribs and back
2. Abscesses in the mammary gland of a doe

Eye and middle ear infection:

1. Partial or complete blindness
2. Pronounced head tilt (may fall over easily)
3. Inability to right themselves

Mastitis: Swollen, bluish glands in lactating does. Ulceration and sloughing may occur with discharge of pus from diseased tissue.

Metritis:

1. White discharge from the vulva
2. Abortion with poor breeding success

Arthritis: Enlarged, painful swollen joints

Postmortem findings:

Snuffles: Inflammation and necrosis of nasal passages which contain mucoid to white purulent material

Pneumonia:

1. Consolidated inflamed area in the lungs. Deep red, sharply demarcated lung lesion and whitish purulent material in the bronchi
2. Cheesy material (fibrin) on the pleura
3. Inflammation of the pericardium and trachea
4. Death caused by inflammation of pleura and collapsed lungs

Peritonitis:

1. Yellow-white deposits (fibrin) on the peritoneum and abdominal cavity (Fig. 211)
2. Abdominal organs adherent to the peritoneum and with one another

Septicemia:

1. Haemorrhages on body fat and heart muscles
2. Enlarged body organs
3. Bluish discoloration of body tissues

Abscesses: Walled off abscesses containing white creamy cheesy pus.

Eye and middle ear infection:

1. Normal eye structure is obliterated by white or yellow puss
2. White pus in one or both middle ears with rare extension to the brain

Mastitis: Swollen mammary gland with red to blue discoloration and congestion. White abscesses may be observed in the gland.

Metritis: Distended uterus contains white pus.

Arthritis: Cloudy fluid and pus present in the leg joints

Fig. 211: Pasteurellosis. Yellowish-white fibrinous deposits in the abdominal cavity.

Judgement : Carcass of the animal is *condemned*.

- if clinical signs of severe acute pneumonia or peritonitis with accompanied fever are manifested on postmortem with swollen haemorrhagic lungs or fibrinous deposits on the peritoneum and organs.
- if multiple abscesses are found throughout the body or in the abdominal cavity.
- in cases of septicemia on antemortem and postmortem examination
- if inflammation of the joints is associated with emaciation

A mild form of the disease showing colds, snuffles, middle ear infection, mastitis or metritis, which do not affect the wholesomeness of the meat or cause systemic changes, may have a *favourable judgement* of the carcass. A few well off abscesses may also render meat fit for human consumption although the carcass may be judged *inferior* due to mutilation caused by removing of abscesses. Consumer should be made aware of this defect by the controlling authority.

Differential diagnosis : Salmonellosis and coccidiosis. Bacteria such as E. coli, Pseudomonas, Listeria and Proteus may cause metritis in rabbits. Staphylococcus aureus has been cultured from mastitis, metritis and arthritis cases. Staphylococcus and Bordetella have been isolated from the respiratory lesions and Streptococcus spp and Actinomyces pyogenes from abscesses.

Parasitic diseases

Diseases caused by protozoa

Coccidiosis

Coccidiosis is the most common parasitic disease of rabbits which occurs in hepatic and intestinal forms. Liver coccidiosis is caused by *Eimeria stiedae* and intestinal coccidiosis by *E. magna, E. perforans* and *E. irresidua*.

Transmission: Faecal contamination of water and food containing oocysts. Humid, dirty and overcrowded rabbit houses predispose rabbits to the infection.

Antemortem findings:

1. Loss of appetite and emaciation
2. Anaemia

3. Diarrhoea in terminal stage
4. Dry fur, pot belly and death

Postmortem findings:

1. Small greyish white nodules in the liver in E. stiedae infections (Fig. 213)
2. Older lesions coalesce and form cheesy masses
3. In intestinal coccidiosis the contents of the intestine are soft and the lesions pinhead size.
4. Greyish white flakes in the intestinal wall
5. Thickened and pale intestinal wall in more advanced cases
6. Oocysts present in the intestinal content

Differential diagnosis : Pasteurellosis, tuberculosis, pseudotuberculosis, listeriosis and salmonellosis.

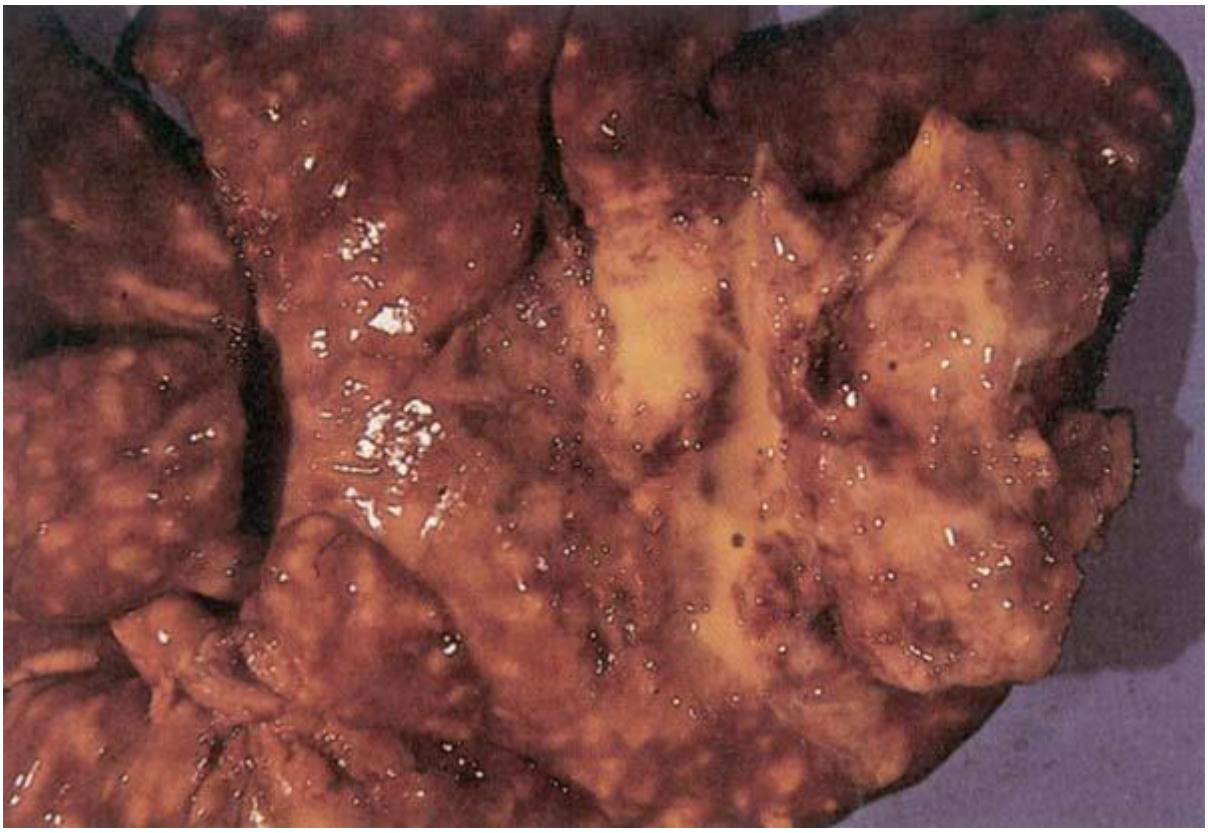

Fig. 213: Coccidiosis. Enlarged liver with multifocal greyish-white coalescing lesions and yellowish liquid pus caused by E. stidae.