Ostrich Diseases
Viral diseases
Newcastle disease

- It is a viral disease of ostriches characterized by high morbidity and mortality, nervous and respiratory signs.
- ND is caused by paramyxovirus (PMV) type 1.
- ND affects all ratites species (ostriches, rhea and emus) also affects all ages but young's are more susceptible than immature or adults.
- Infection with ND occur through ingestion or inhalation and transmit through direct and indirect contact.
1. General signs and increased mortalities.
2. Respiratory signs (velogenic and mesogenic strains).
3. Diarrhea (velogenic viscerotropic strains).
4. Nervous signs:
   A) Shaking of the head (head tremors).
   B) Convulsion of the neck.
   C) Torticollis (un-controlled head movement).
   D) Complete neck paralysis.
   E) Neck laid on the ground (limp neck).
   F) Incoordination and paralysis.
   G) Frequent movement of the 3rd eye lid.
5. Oedema of the head and neck.
6. Death finally.
7. Drop in egg production (Egg pause syndrome) in breeders.
Lesions

1. Oedema of the head and neck.
2. Enteritis.
3. Peticheal haemorrhages on the serosal membranes.
4. On the histopathological sections of the brain there were oedema, neural degeneration, and perivascular cuffing of the brain tissues.
Prevention and control

• Biosecurity and strict hygienic measures.
• Vaccination:
  1. Lasota vaccine is given at the 1\textsuperscript{st} 2 weeks of age (eye drop or spray).
  2. Inactivated ND vaccine is given after 3-4 weeks from the 1\textsuperscript{st} vaccination (1ml/bird by injection).
  3. Repeat inactivated vaccine every 2 months at dose of 2ml/bird.
• In case of outbreak, give emergency vaccine, Broad spectrum antibiotic and vitamin mixture as supportive treatment.
Avian influenza

- Acute viral respiratory disease causing high mortality in young ostriches and green discolouration of urine.
- Avian influenza (AI) is caused by Orthomyxovirus type A (subtype H7N1, H5 N2).
- AI affects all ratites species (ostriches, rhea and emus) also affects all ages but young's are more susceptible than immature or adults.
- Infection with AI occur through ingestion or inhalation and transmit through direct and indirect contact.
Signs

1. General signs (depression and anorexia).
2. Green discolouration of urine.
3. Oedema and swelling of the head, neck, eye lid, and leg (hock).
4. Blood tinged discharge from the nostrils.
5. Haemorrhages on the feet and shank (leg haemorrhages).
6. Nervous signs (incoordination and loss of ability to walk or stand).
7. Respiratory signs (ocular discharge).
8. Sudden death with high mortality rate.
Lesions

1. Mucoid enteritis especially at the upper part of the intestine.
2. Enlarged, congested and friable mottled liver.
3. Airsacculitis.
Prevention and control

• Biosecurity and strict hygienic measures.
• Vaccination: Vaccinate in endemic areas by using local (autogenous) inactivated vaccine.
• In case of outbreak, give supportive treatment (multivitamins) and antibiotics.
Avian pox

- Ostrich pox is a cutaneous and mucosal viral infection affects the un-feathered parts and or the mucosa of the upper digestive and reparatoratory tract.
- Ostrich pox is caused by avipox virus.
- Ostrich pox transmitted by mosquitoes through wounds.
- Cutaneous form induces wart like nodules, blisters and crust lesions.
- Mucous membrane form induces fibrinous plaques and pseudomembranes on the buccal cavity, pharynx, larynx which may cause respiratory signs, suffocation and death.
- Prevention by eradication of mosquitoes and vaccination with commercial fowl pox vaccine by wing web or scarification method at age of 10-14 days of age.
Infectious bursal disease

- Infectious bursal disease (IBD) affect ostrich chicks at 1-4 weeks of age.
- The signs are depression, anorexia, diarrhea, sternal recombancy, muscular tremors and abnormal head movement.
- The lesions are atrophy of the bursa, enteritis and pulmonary congestion.
- The disease control by biosecurity and supportive treatment.
- Prevention through biosecurity and there is no vaccination.
Borna disease

- It is a viral disease affecting ostriches at 2-8 weeks of ages causing high mortality.
- The disease transmit by mosquitoes.
- The infection is characterized by paresis and inability to move and finally paralysis.
- There were no specific lesions.
Diseases problems of non-specific causes
Omphalitis or infected yolk sac

- It is a common disease of newly hatched ostrich chicks.
- It is caused by egg shell bacterial contamination inducing infection of yolk sac.
- It is treated by surgical removal of the yolk sac followed by antibiotic therapy.
- Prevention through adoption of strict hygienic program for egg storage, incubators and hatcheries.
Causes of early chick mortality

1. Bacterial infection of the intestine and stomach:
   ✓ Caused by Cl. perfringes type A, b or D.
   ✓ Occurs mainly in young ostriches (-4 weeks old).
   ✓ Predisposing stress factors are related to egg cleaning, nutrition, water quality, and house cleaning.

2. Wet chicks and stress.

3. Diarrhea, respiratory problems, nutritional muscular dystrophy, crooked legs, toxic fish meal, gastric stasis and impaction.
Foreign body ingestion

• Like impaction.
• Birds of all ages eat any type of objects (nails, tools, etc..) eaten by curious bird.
• These objects are non-digestible.
• If the object is too large and block the normal activity of the proventriculus, it will resulted in chronic impaction.
• Surgical intervention is very important to correct this problem in early stages.
Fading chick syndrome (mal-absorption syndrome)

• It is fetal disease of young ostrich chicks.
• The exact cause is un-known.
• It affects ostrich chicks at age (1-3 months) but older birds (6 months) may take the infection.
• The bird stop, eating, drinking with listlessness and finally death.
• Treatment by fluid therapy.
Impaction and intestinal obstruction

• The cause is sudden feed change (sudden addition of higher roughages in feed stuff).
• All ages are susceptible.
• Surgical treatment and correct the feed.
• Prevention through:
  1. Acclimatization of birds on a variety of substrates very early in life.
  2. Avoid sudden additional changes.
  3. Avoid sudden addition of high roughages feed stuff.
Leg and toe problem abnormality

1. Slipped tendon.
2. Bowed legs.
3. Turned or crooked legs.
Slipped tendons

- It is a disease condition of non-specific cause affect ostriches and characterized by slipping of the hock tendon from the groove between 2 condoyles.
- This condition is caused by trauma, bad quality floor and improper exercise.
- Affected birds show locomotors disturbance and lameness.
- Early treatment with surgery.
- Minimize the damage of the tendon after slipping.