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Common animal diseases and their management

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Abstract

India is comprising 535.78 million livestock population as per 20th livestock censusand India contributing 187.7 million tons of milk. There are many factor which affect animal health and production. One of major reason is disease or illness. It may be acute type or Chronic one. Disease is an infectious if it's communicate from one animal to another. It may be zoonotic which spread among human beings. Zoonotic diseases are directly transmitting the infectious agent from animal to human being or it's vice versa. Disease is often accompanying with severe pain, inflammation, fever and as a result of this production would be decreased in the herd. Stress, high stocking density, inappropriate hygienic environment, extreme environmental stress, poor nutrition and inadequate shelter will elicit the mechanism and transference of disease. There are fewimportant diseases which are may be of viral origin or bacterial origin or parasitic originetc discussed below

Key words- Animal, disease, FMD, Milk Fever

1. Foot and Mouth diseases

FMD is an acute extremelytransferrable and contagious disease of cloven footed animals described by vesicular eruption ulceration in the mouth, foot, teats and udder.

The disease is caused by virus namely Aptha Virus, Saliva is the main source of infection, contamination with feed can affect the other healthy animals.

Symptom: Salivation from the mouth. Vesicles on buccal cavity, Blisters, vesicles on foot and tongue leading to ulceration. Lameness in all legs leading to foot wound and secondary bacterial

complication. High morbidity and low mortality. In appetence shivering of the body,

smacking of lips and pregnant animal may abort in extreme cases; Young calves may sometime die. Loss of milk production.

Treatment:

Vaccination of animal with Foot & Mouth Disease & Hemorrhagic Septicemia (FMD+HS) Combined Oil Adjuvant Vaccine, booster in six monthly intervals (2018-19) 3-5 ml, IM, RakshaTriovac (which include HS& BQ and FMD) 3 ml IM at the age of 3 month and re-vaccination to be done for every 6 months. (Booster is not required for calves)

Control measures:

Movement all animal to be controlled. Animal shed to be spray with formaldehyde or calcium lime powder.

All water resources are washed with potassium permanganate (KMNO4) solution. Applying boroglycerin solution (Boric acid+Glycerin) on wound will be effective. Parenteral administration of antibiotics I/M for 5 days can control the bacterial infection, Foot bathing with Copper sulphate solution will be effective.

2. **Tuberculosis**

Bovine **tuberculosis** (**TB**) is a chronic disease of animals caused by a bacteria called Mycobacterium bovis, (M. bovis) which is closely related to the bacteria that cause human and avian **tuberculosis**.Loss of weight and hide bound condition due to acid fast bacilli (Mycobacterium tuberculosis).Infection is mainly by infected droplets expelled from infected lungs is the usual route of infection. Ingestion of contaminated milk the inhaled bacilli enter into alveolar macrophage to proliferate further. This aggravates the animal to stimulate hyper sensitivity because of production of cytokines makes breathing complications.

Clinical findings:

Toxemia, lethargy, weakness, anorexia, fluctuating fever, Bronchopneumonia, moist coughs difficulty in breathing, Tachycardia and superficial lympnode enlargement.

Treatment/Control measures:

In Human BCG vaccine is successful. However, in animal it cannot possible by vaccine. The main reservoirs of infection are man and cattle. Test the animal to Mallein test and positive animal are carriers of the disease should be isolated. Routine hygienic measures aimed at cleaning and disinfection of contaminated premises will be useful. Chemotherapy is effective in human being not in animals. Streptomycin based antibacterial and Para amino salicylic acid will be effective in some extent if provided in long course.

3. **Hemorrhagic septicemia(Shipping fever, Gal ghottu)**

HS is a severe respiratory disease associated with excess stress/ transport too much crowded sheds caused by PasturellaMultocida. Mostly this organism found in lungs and Upper Respiratory Tract. 8-15 % mortality is common.

Symptom: Include affected animal are depressed. Anorexia, fever - Temperature varying between 103-107F Serous, mucous and purulent discharges with rapid shallow breathing

and often cough. Irregular breathing, grunting sound on lungs moist rales and crackling sounds are easily heard during auscultation. If the animal not treated it will die in a week. Or some time animal may die within 24 hours due to hypoxia.

Treatment:

Treatment with antibacterial sulphamethazine with penicillin combination is effective. Now a days ceftiofur salt is also used in mixed infection.Inj.Biotrim I/V is useful.

Controlmeasures:

Vaccination of animal with Foot & Mouth Disease & Hemorrhagic Septicemia (FMD+HS) Combined Oil Adjuvant Vaccine, booster in six monthly intervals (2018-19) 3-5 ml, IM, Oil adjuvant Vaccine for HS is available. The combined vaccine RakshaTriovac 3 ml I/M for every Year. The vaccination should be carried before and after monsoon. Because the disease occurrence is common during rainy season. Stress to the animal to be reduced. Good ventilation is important management tool. Over-crowding to be minimized. Transport the animal in vehicle under stress free condition/atmosphere. HS normally hit less immune animals like calves weak and pregnant animals.

4. Brucellosis

Brucellosis is an infectious disease of cattle characterized by abortion in last trimester of pregnancy caused by Brucellaabortus. It's a serious health problem. Infection occurs through infected carrier in the herd or bull which transmits the organism through semen during copulation spreading to other animal. Aborted fetus content and the infected bull semen are the major source of contamination.

Clinical findings:

Expulsion of dead fetus, Retention of placenta and infertility and loss of milk yield. Usually abortion at last term of pregnancy. In bull it leads to permanent sterility, orchitis and inflammation of epidydimis,

Control measure:

Vaccination of female calves with brucellaabortus strain 19 is effective in increase the resistant to infection. However, this strain will be useful only for female calves up to 7-8 month of age. Test and isolate the carries host. Positive tested animal should be removed form herd. Hygieniccondition at farm may reduce the chances of spread this bacterium.

5. Babesiosis

Tick borne protozoan parasite Boophilus tick serve as a vector. The disease transmitting to the animal while feeding nymph and the boophilus tick feeding the cattle invading the erythrocyte causing cellular damage.

Clinical findings:

They are in acute stage high temperature increase respiration, muscle tremor. Weight loss. Heamoglobinurea, heamoglobineamia.

Constipation or diarrhea also at later stage. Splenomegaly, swollen liver, enlarged gall bladder, congested kidney anemia and Jaundice.

Treatment: Inj. Berenil RTU 8 mg.perkg.b.wt will be useful with supportive therapy.

6. Mastitis

Mastitis is an infectious disease condition resulting in an inflammatory reaction in the mammary gland of the animals. It may be accompanied by signs of inflammation in the mammary gland including swelling, redness, and painfulness.Caused by Streptococcus and staphylococcu
s.

Control measure: before milking the udder to be washed with clean potable water. And udder wiped with clean dry cloths. Washing with KMNO4 or anti septic solution. Antibiotic therapy includes ceftriaxone or ceftiofur antibiotics.Pencillin, Cloxacillin group found to be effective in treating moderate cases. Mostly Intra mammary infusion along with parenteral route found to be effective. Management of environment, Proper ventilation clean floor surface. Nutritional supplementation of vit A, E and B carotene and trace minerals like Selenium modify the immune system of the cow to combat to infection. **Teat dipping** with suitable teat dip solution Immediately after milking.serratiopeptidase tablets also helpful in fibrous cases.

7. Milk Fever (Hypocalceamia)

It is believed that **hypocalcemia** causing **milk fever** is due to a lower level of responsiveness of the cow's tissues to circulating parathyroid hormone. The resultant decreased plasma calcium causes hyper excitability of the nervous system and weakened muscle contractions, which result in both tetany and paresis. It is associated with parturition. During peak lactation due to excessive milk production dairy cow require higher amount of serum calcium. The major fodder resources are insufficient to meet the requirement of calcium. Henceforth supplementation is must. Lack of serum calcium level is the major contributing factor for milk fever.

Clinical symptoms: Hypothermia, anorexia, animal appear to be in coma. This occur immediately after calving. High yielding animals are likely to suffer from this disease.

Treatment and control measures: Treatwith 500 milliliters of 23% calcium gluconate IV and followed by the administration of two oral calcium bolus given 12 hours apart. Corticosteriods coupled vitamin B complex injection will recover the animal quickly.

8. Retention of placenta:

Retention of fetal membranes, or retained placenta, usually is defined as failure to expel fetal membranes within 24 hr after parturition. Normally, expulsion occurs within 3–8 hr after calf delivery animal with retained fetal membranes are at increased risk of metritis, displaced abomasum, and mastitis.

Treatment:

treat with manual removal by veterinarian. The maternal caruncle and fetal villi to be detached slowly from finger through vagina. Hormonal therapy is to improve uterine contractility followed by evacuation of placenta. PGF2 Alpha for 3-4 days.

Inj.Oxytocin 50 unit I/M. Estradiol 25 mg. Some time in combination with calcium supplementation, Ergot alkaloid 10 mg, Inj.Lutalyse 5 ml, Clostenol sodium Dinoprost 2ml will be effective.

Prevention:

There are no standard preventative regimes for ROP. Good dry cow management is the best way of preventing ROP and reducing its effects. This will include supply of correct nutrients, particularly magnesium, and fat soluble vitamins, maximizing dry matter intake, maintaining the correct body condition score and supplying a clean dry environment.

Conclusion:

Animal diseases are so dangerous that it may be one of the reason to permanent closure of dairy farm due huge loss. It is necessary that all precautionary measures should be taken to avoid these diseases.All new arrivals to the farm should be isolated for at least 30 days and dewormed.Young animals are generally more susceptible to parasites than adults. Therefore, young animals should be housed separately from adult animals. Treatment should be followed by chemoprophylaxis to prevent reinfection.A concentration of one part of copper sulphate in one million parts of water is generally recommended but stronger solution may be necessary when large quantities of decaying organic matter are present.Feed should be placed in troughs that cannot be contaminated by faeces and waterers should be kept clean and free of contaminants.