Policy of control and prevention of infectious bursal disease at poultry farm

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Abstract
Infectious Bursal disease or IBD is a common disease in poultry which is effecting birds specially hen, turkey and other species of poultry birds. It is caused by a virus called Birna Virus as virus belongs to family of Birna viridae. This virus effecting many birds in a year and becoming the cause of high mortality of birds if we don’t follow the precautionary measure it will cause 40-50% mortality. This study will give a policy which should be adopt in order to minimize the risk of IBD. By following the policies which are mentioned in this study you can manage the flock which is infected by IBD. We also tried that policy on infected birds and we got remarkable results we saw that these policies save birds from IBD and also help to recover sick birds. So our that study is for our farmers and poultry industrialist who get knowledge by reading this. We this study bring revolution to fight against IBD. This study is research based and completely original so it will help to reduce the risk of viral infection.

Keywords: Bursa of bird, Birna virus, Birna viridae, Policy against IBD, Ratio of mortality

1. Introduction
Infectious Bursal disease is caused by a virus called Birna virus which is common in al over world. In this type of disease bursa is badly affected by the virus. As we know that B cell formed in bursa in this bursa damage by the virus so there will be lack of B cells in the body. B cells are performing vital role in immunity so if there will be less B Cells in the body immune system will be weak. IBD mostly effects a bird between the age of 14th -28th day (Bolis et al., 2003). The causative agent of IBD Birna virus was identified in the United States of America in 1962. If Virus enters in a farm approximately all birds of the farm would be effect by the IBD but mortality rate of thise disease is approximately 20%. IBD effects Layer hen at the age of 2-6th weeks (Muller et al., 2003). White leghorn is highly
effected by this disease while the local breeds are less effect by IBD. If you do not Manage the
temperature of Vaccine it will not be effective as we know that vaccine contain microbes and microbes
die at high temperature (Lasher & Davis., 1997). So we should manage the temperature of Vaccine
otherwise vaccine will not be effective. If we don’t manage the Vaccine Temperature and if don’t
handle the Vaccine properly it may also cause disease in birds so it’s very necessary to handle vaccine
properly for best results (OIE,. 1995).

The aims of that studies are

☆ To highlight the cause and Solution infectious Bursal Disease.
☆ To give the proper policy for controlling disease or preventing disease

So that industrialist and farmer save them from big loss.

1.1. Other names:

❖ Gumboro
❖ Avian AIDS as it destroys immune system by suppressing bursa and Thymes gland. It kills B
cells and cause immunosuppression (Mahgoub et al., 2012).

1.2. Transmission route of disease

Disease is transmit though feces, or by eating of contaminated feed or drinking contaminated water
(Abdel-Alim & Saif., 2001). Generally feces are major source of the transmission of IBD as feces
contain higher amount of virus. IBD transmit doors to doors by fomites. There are two serotype of
IBD (Delmas et al., 2004). Serotype1 which effects Chicken. While serotype 2 effects waterfowl and
hens both but waterfowl are more resistive against this disease (Lukert & Saif, 2003). As this disease
is immunosuppressives it decrease the immune system’s efficiency so other diseases also attacks on
the bird. Mostly Newcastle disease, IBH, CRD, Marek’s and IB attacks on bird when IBD minimize
immunity (Zierenberg et al., 2004). IBD also found in some other birds like penguin etc. but it did not
cause any disease or symptoms in them (Zierenberg et al., 2004).

1.3. Clinical signs of IBD

Stress, Anorexia, Dehydration, White pasty diarrhea, Laziness, and Bird will not eat feed during IBD.
(Chaka et al., 2012).

1.4. Lesions

Enlargement of Bursa (Hernadez et al., 2008). Haemorrhages or atrophy of Bursa. Haemorrhages on
Thigh muscles. Dehydration. Swollen kidney (Campbell., 2001; Lowenthal et al., 2007; Sharma &
Kim., 2000; Jackwood & Sommer, 2010). May leads to kidney failure. Swollen urates (Pages-Mante et
al., 2004; Nunoya et al., 1992; YIP et al., 2012).

2. Method and material

2.1. Diagnose

IBD can be diagnose by PCR v2 gene is detected. Isolation of virus technique. Postmortem .ELISA.
Calculation Antibody counts through serological technique.
2.2. Treatment of disease
As we know that there is no treatment for viral diseases so there is no treatment for IBD but we can minimize the effect of disease by doing following practices (Eterradossi & Saif, 2013; OIE, 2004; Kim et al., 2000; Ignjatovic et al., 2001).

2.3. Flushing of bird.
Use of antibiotic which may inhibit the secondary infection through bacteria. Use of Multivitamin especially Vitamin E (Tocopherol) and Vitamin C (Ascorbic acid) (Skeeles et al., 1980; Henry et al., 1980; Van den et al., 2004). Use salted water or ORS which may help chick to meet salt and water requirement of the bird. Supporting therapy (OIE, 2012; Brandt et al., 2001).

2.4. How to do flushing of bird
Add 4% sugar in the water. Temperature of water should be moderate. Use that water within 3-4 hour (Kanoblic al., 2000; Jackwood., 2004).

2.5. What is supporting therapy?
In this we gave bird 1/3 ratio of milk and water in which some multivitamins are added this therapy will support bird to fight against disease (Wu et al., 2007; Zierenberg et al., 2000).

3. Control of disease
There are couple of methods in order to control the disease
★ Biosecurity.
★ Immunization (Vaccination).

3.1. Biosecurity
Word Bio means Life and Security means to secure, collectively Bio security means the protect birds from living organisms like microbes and other harmful organisms. The biosecurity is defined as set of practices which are done in the farm in order to save from living organisms. There are some practices by which we can save our flock from microbes
★ Fumigation, Sanitation and disinfection of farm and farm equipment should be done after every flock.
★ Don’t allow anyone in the farm without sanitation.
★ Use sanitized equipment.
★ Give hygienic feed and water to bird.
★ Use B, BB, BBB Level of biosecurity according to your requirement.

3.2. Vaccination
Vaccination of IBD should be done at the age of 14 day. There should be two doses of vaccination for IBD one on 14th day other dose on 28th day as a booster dose. It will provide immunity to the bird.
3.3. Precautions
There are some precautions while performing vaccination (Jackwood & Sommer, 2005; Jackwood & Sommer, 2007). Use always sanitized and clean container for vaccination (Van et al., 2000; Dacic et al., 2008; Farooq et al., 2003). Check the bird is there any sign of IBD if yes than do not vaccine to the bird as it may cause high mortality ratio as virus of IBD already present in the body by this vaccine it would be stronger (Dormitorio et al., 2007; Letzel et al., 2007). All bird should be vaccinated for this add color dye to water Color on beak will determine that those bird drink water having vaccine (Muller et al., 2012; Rautenschlein et al., 2007; Lasher & Shane, 1994).

4. Conclusion
This Policy paper show or give the method of Controlling Infectious Bursal Disease. This paper will provide complete guidance to students about IBD and this paper will also help the poultry industry to overcome IBD and save themselves from Big Loss. A study was done by us we studied on 1000 birds which were effected by IBD we follow the above mentiond policy we got remarkable results.

![IBD Effected cases and Mortality Ratio](image)

Figure 1: Effect of above policy on mortality

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