INFECTIONOUS BRONCHITIS IN A FLOCK OF 32-WEEKS-OLD LAYERS IN UYO: A CASE REPORT.

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SUMMARY

On 13th June, 2012, a flock of 500 numbered back yard layers of about 24 weeks old was reported as laying white (chalky) thin shelled eggs that broke on application of little pressure. The eggs were said to be irregular in shape, with some having big round and pointed ends at the same time. Some were reported to be big at both ends and small at the centre. While taking the case history it was discovered that the birds were purchased from a commercial Day-old-Chicks dealer from Uyo who in turn purchased the chicks from a commercial hatchery in Ibadan, Oyo State. The birds were housed in a block and barbed wire and corrugated sheet house, in a deep litter system. The birds were not vaccinated against Infectious bronchitis, as observed in the farm vaccination record, but other vaccinations were carried out accordingly (NDV-i/o IBD-I, IBD-II, NDV-I, Fowl pox, NDV-KI, NDV-KII etc. The rate of mortalities observed as the onset of the diseases till the time it was reported was less than 2 %. Sick birds were isolated immediately to the isolation pen, while antibiotics and multivitamin therapy was initiated for 5 consecutive days. After the therapy the litter was removed and replaced with fresh saw-dust. Major clinical signs observed were, depression, inappetence, little sticky mucoid secretion from the nostrils on application of pressure, rahls, sneezing, mishappened eggs, loss of egg pigmentation and most seriously the sharp drop in egg production which was why the attention of the veterinary clinic was requested. As at the time of visit to the farm, the hens were laying 5 crates of eggs per day; a serious drop from the initial 13 crates per day.

Keywords: Infectious Bronchitis, Outbreak, layer flock, Akwa Ibom, uyo

INTRODUCTION

Infectious bronchitis (IB) is a contagious and a very serious respiratory viral disease of poultry. It is one of the most common viral infections of chickens all over the world and Nigeria is not excluded from the list. The virus causing infectious bronchitis was first reported in the United States of America (USA) in the 1930s as an acute respiratory disease mainly of young chickens (OIE, 2008). The infectious bronchitis Virus was also reported for replicating in the respiratory tract and epithelial cells of gut, kidney and oviduct (Quingmei et al., 2011). The virus is believed to, a part from respiratory diseases, cause urogenital tract disease of birds.

Infectious bronchitis may also be the primary factor in serious outbreaks of mixed respiratory tract infections. involving Mycoplasma organisms, bacteria, particularly Eschericia coli (Ignjatovic, 1976). Symptoms as listed by
the Merck veterinary manual (2006) include, coughing, sneezing and gasping in young chicks, loss of appetite, wet litter and sharp drop in egg production in layers. The symptoms of infectious bronchitis develop and spread quickly because of these there is possibility of all the flock becoming infected in a short time. Mortalities I chicks may reach 30-60% (organicvet.co.uk), but production loss as a result of infectious bronchitis infection are said to be greater than those of mortalities (Cavanaugh and Nagi, 1997).

Since production may drop to 50% or near zero depending on the strain or virulence, the eggs from IBV infected flock have poor or market quality as the eggs will have mishappened shells, no shells pigmentation, rough egg shell, thin shells with watery albumen (Butcher et al., Infectious-bronchitis.com, OIE Terrestrial Manual 2008 and Shankar, 2008).

According to the Merck Veterinary manual quoted earlier, the cause of infectious bronchitis is a coronavirus, it is a positive sense-single stranded RNA genome virus (Ababneh et al., 2012) of the family Coronaviridae of of the Nidovirales. The infectious bronchitis disease virus is placed in group 3 coronaviruses. There are many serotypes of the IBV and new serotypes are still being discovered. For example, in the 1991 there was an increase in the outbreak and incidence of Infectious bronchitis in the U.K. as reported by (Gough et al., 1992), which was attributed to a new more virulent strain (Gough et al., 1996). However, tow more serotypes can co-exist within an area at the same time. While some strain enjoy a worldwide distribution, others are restricted to a geographical area (infectious -bronchitis.com). The IBV is transmitted through aerosols (sneezing), recovered bird continue to shade the virus in feaces, horizontally and through contaminated organic materials, such as water, feed bags, rodents, farm equipments etc. vertical transmission is from hen to the chicks through the eggs but affected embryo will not hatch. With incubation period of 18-36 hours the IBV triggers respiratory signs such as sneezing, gasping, watery discharges from the nostrils and the eyes, rattling, depression, sharp decrease in feed and water consumption and reduction in egg production. The severity of the disease is directly proportional to the immune status, age and general health of the entire flock.

During post mortem, lesions include conjunctivitis, cheesy exudates in the trachea, cloudy air sacs, swollen oviducts, swollen kidneys, egg peritonitis, and inflammation of the trachea. There is no known drug that is effective in the treatment and control of the infectious bronchitis. However some antibiotics may be administered to curbed complications from bacteria especially Eschericia coli. In the case of young chicks, vitamins and antibiotics in water is advised to boost appetite; good ventilation and increasing the temperature of the house will help and improve the recovery process and as well reduce mortality. The best means of protecting the birds against infectious bronchitis is through vaccination, but vaccination may not provide complete immunity as strains in the vaccine may not be the strain causing the disease in the flock. A vaccine for infectious bronchitis is available as live or killed vaccines. The live vaccines are administered to young chicks at 3 weeks of age while the killed is administered to the adult birds before the onset of egg production.
CASE REPORT
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POST MORTEM EXAMINATION
Post mortem examination was carried out in the farm with two dead birds taken from the flock.

Two live birds was also taken from the isolation pen and were taken to Edie Veterinary and Pest Control Services for a Second Opinion on the post mortem. At the clinic the birds were sacrificed to confirm the presence of the disease. Lesions observed were, cloudy air sacs, congested and swollen kidneys, edematous trachea with fluids / exudates, sticky colourless mucous from the mouth and nostril and inflamed oviducts. These confirmed the presence of the disease in the flock.

DISCUSSION
Vaccines are preparations containing weakened or dead microbes of the kind that causes disease, administered to stimulate the immune system to produce antibodies against the disease. (Ecanta dictionaries, 2009). A vaccine is used in building up the animals’ immune system against a disease(s) it has no immunity against. Just as Jennings, 1994 stated the vaccines are among the most cost effective means of protecting the health of humans and livestock. When an animal lacks immune protection against a particular disease as a result of the inability of the farmer to vaccinate the animal, it therefore means that the animal is susceptible to that disease on successful invasion of the animal system by the pathogen. However, an animal can be vaccinated and still cannot defend itself against the same disease challenge when the need arises. This is as a result of emergence of new strains or serotypes of the organism responsible for the disease.
In the case of infectious bronchitis, new strains continue to emerge (Ababneh et al., 2012) described infectious bronchitis virus as a very dynamic and evolving virus, causing major economic loses to the global poultry industry. The above author mentioned the presence of new strain of IBV virus (CK/CH/LDL/791) strain in the Middle East. He also mentioned cases of vaccine failure as the new strain may have been responsible. The above mentioned strain (CK/CH/LDL/791) was first discovered in China in 1995 (Liu et al., 2001). In China, IBV strains were first isolated and identified in 1982 (Quingmei et al., 2011). Today China has been able to identify and document over 200 strains of IBV.

In Nigeria, there is no documented evidence of IBV isolation and identification. The vaccines available for IBV control in Nigeria are all imported. It is not certain whether the importers of theses vaccines are familiar with the strains or serotypes of IBV that may be prevalent in Nigeria.

It is very important also to note that infected chickens and those vaccinated with live IBV may intermittently shed virus for many weeks or even months; by importing and using foreign live vaccines, we might be introducing new strains of IBV into Nigeria.

It is also important to note that proper storage and handling of vaccines is considered a very necessary factor in maintaining the potency of the vaccine. The storage and handling of vaccines cannot be guaranteed as a result of inconsistent power supply and the fact that most dealers in livestock drugs and biological are non-professional in the field of animal health.

In the case of this report, the author went round the entire Uyo city (from shop to shop) looking for infectious bronchitis vaccine but could not find one except for one shop that was run by a veterinary Doctor in the state.

The author was informed that the vaccine will be available on request as people do not patronize the vaccine.

Some farmers in Uyo metropolis were also questioned to ascertain if they have knowledge of the disease existence, but all the farmers questioned denied knowledge of knowing about the existence of that kind of disease. The farmers all knew about Newcastle disease, Gumboro, Fowl typhoid, etc. and other common poultry disease which they have been vaccinating their birds against.

CONCLUSION

Lack of information on certain poultry disease of economic importance is one of the factors hindering the development and progress of animal agriculture in Nigeria. The success of the animal agricultural business depends solely on all the following:

- Availability of information on the prevailing disease.
- Availability and easy accessibility of the means of preventing, controlling and management of the prevailing disease.

There seems to be a little or no information available in Nigeria about Infectious bronchitis; its prevalence and serotypes. Since infectious bronchitis is also a respiratory disease, we should not be surprised if infectious bronchitis is implicated in many cases of CRD in poultry flock.
Since most farmers in the State have no knowledge of the existence of the disease, it is important to carry out an awareness campaign on infectious bronchitis in the State. More so, farmers should be encouraged to patronize qualified veterinarians for proper vaccination of their flock against prevailing diseases. This will not only minimize losses but will encourage standard practice in the profession.

The Veterinary and Medical Association of Nigeria should make it a point of duty to register and train periodically all those involved in the marketing and distribution of veterinary drugs and biological, most especially, the non-professionals on the need for proper storage of vaccines and biological. The need to maintain and not break the cold chain should be over emphasized.

REFERENCES


