

Communication

A preliminary note on the prevalence of infectious bursal disease of poultry in Cameroon

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L'existence de la bursite infectieuse (ou maladie de Gumboro) dans des élevages industriels de volailles au Cameroun a été recherchée à l'aide des techniques sérologique et virologique. L'anticorps viral a été trouvé dans 118 sérums (33,9 p. 100) sur les 348 prélèvements examinés à partir de sept lieux choisis au hasard. D'autre part, une recherche virologique a été réalisée sur des prélèvements de bourse de Fabricius obtenus par autopsie à partir d'élevages dans lesquels on avait noté un degré élevé de mortalité chez les jeunes. Cet examen a révélé la présence de l'antigène viral de la bursite infectieuse. Ces observations confirment l'existence de la maladie dans les élevages industriels de volailles camerounais. *Mots clés* : Élevage industriel de volaille - Volaille - Maladie de Gumboro - Cameroun.

Introduction

Infectious bursal disease (IBD) is an acute contagious virus disease of young birds characterized by the inflammation of the bursa of Fabricius of affected birds. The disease was first reported in the USA (1) and subsequently in other parts of the world (5). An attempt was made to investigate the probable role of IBD in some industrial poultry flocks in Cameroon and the first results are presented in this paper.

Materials and methods

Sampling of sera

Serum samples were collected from industrial poultry flocks located in Yaounde, Douala, Tiko, Bamenda, Bafousam, Ngaoundere and Garoua (map 1). These flocks were not vaccinated against IBD. Blood was collected by jugular vein puncture and allowed to clot at 4 °C overnight. Serum was separated from the blood by centrifugation at 1000 rpm for 10 min. Separated sera were stored at -20 °C until tested.

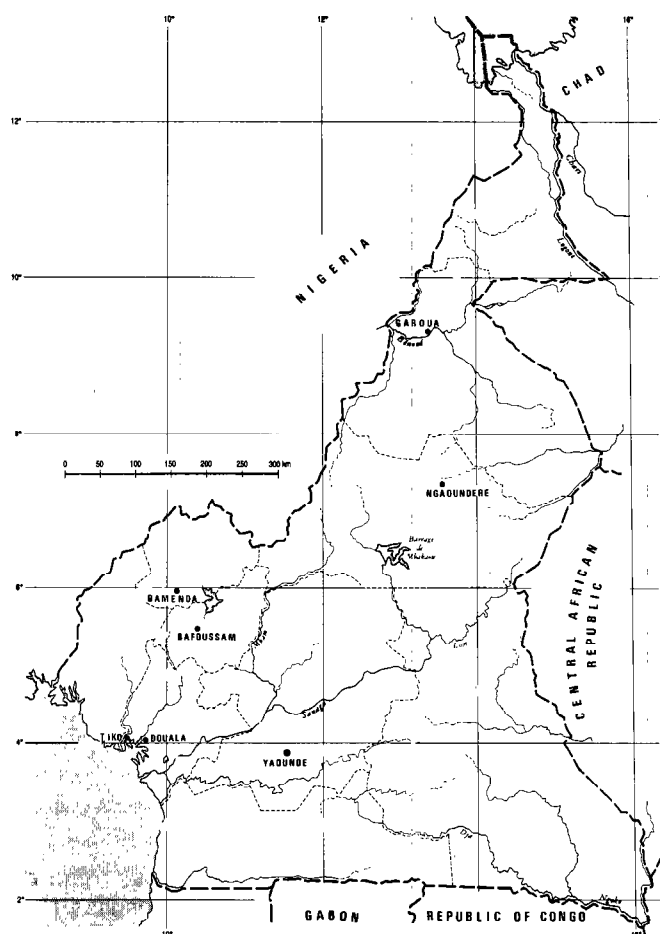
Serology

Sera were tested for antibody to IBD virus by means of the Ouchterlony agar gel precipitation technique (AGPT). A one per cent (u/v) oxoid purified agar prepared with deionised water was used. The sera were tested against known positive IBD virus antigen prepared from the bursa of Fabricius (3).

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Map 1 : Cameroon. Localization of industrial poultry flocks sampled for IBD.

The plates were incubated in a humidified chamber at 25-27 °C and examined daily for precipitation lines.

Sampling and testing of bursa of Fabricius samples

The bursa of Fabricius samples were obtained at autopsy from chickens that died during suspected outbreaks of diseases in Yaounde and Bamenda. One g of each bursal sample was macerated in 2 ml of normal saline in a manual tissue homogenizer. The homogenate was frozen, thawed and clarified at 2000 rpm for 10 min. The supernatant was tested against known positive IBD serum in the AGPT (3).

Results

Serology

Antibody to IBD virus antigen was detected in all of the sampled poultry flocks. Out of the 348 serum samples

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TABLE I Antibody to IBD virus in industrial poultry flocks in Cameroun.

Sample location	No. of sera tested	No. of sera positive	Percentage of positive sera
Yaoundé	98	40	40.8
Douala	40	16	40.0
Tiko	40	14	35.0
Bamenda	82	22	26.8
Bafoussam	38	13	34.2
Ngaoundéré	25	6	24.0
Garoua	25	7	28.0
Total	348	118	33.9

tested, 118 (33.9 %) were found positive. Details of the results obtained for various flocks are indicated in table 1.

Virus antigen detection

IBD virus antigen was detected in bursae of chickens from flocks during outbreaks of diseases in Yaounde and Bamenda. Out of the 31 bursa of Fabricius samples tested, 9 (29 %) were positive.

Discussion

Antibody to infectious bursal disease virus was detected in all of the seven industrial poultry flocks sampled in Cameroon. Since these flocks were not vaccinated against IBD, this antibody could only have resulted from natural infection. Also, IBD virus antigen was detected in the bursae of young chickens that died during two outbreaks at Yaounde and Bamenda. These results suggest that the virus is active in the Cameronian industrial flocks and the overall serological incidence of 33.9 % is high enough to suggest that IBD is endemic. In previous years, many outbreaks of undefined diseases occurred in these sampled flocks causing mortalities as high as 25 %. It is possible that the IBD virus was involved in these outbreaks. The involvement of IBD virus in recent outbreaks in Yaounde and Bamenda flocks support this view.

IBD has been involved in diseases of commercial poultry in neighbouring countries such as Tchad (6) and Nigeria (4). In Nigeria the disease has been associated with substantial economic losses in industrial poultry flocks (2).

Conclusion

Evidence has been provided that IBD occurs in industrial poultry flocks in Cameroon. Serology shows a prevalence rate of 33.9 %. It is advisable that the application of adequate control measures against IBD should now be recommended to prevent the Cameronian poultry from further economic losses.

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The occurrence of infectious bursal disease (IBD) in industrial poultry flocks in Cameroon was investigated by serological and virological techniques. Antibody to IBD virus was detected in 118 (33.9 %) out of 348 serum samples collected in seven randomly selected areas. On the other hand, virological examination was performed on bursa of Fabricius samples obtained *post-mortem* from flocks in which there was a high mortality among young birds. This virological examination revealed the presence of IBD virus antigen. These observations confirm the occurrence of infectious bursal disease in Cameronian industrial poultry flocks. *Key words* : Industrial poultry - Poultry - Infectious bursal disease (IBD) - Cameroon.

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