

Surveillance of Mycoplasma gallisepticum in Pet, Game and Free Flying Birds

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Abstract : The Mycoplasma gallisepticum (MG) is the major cause of economic losses in birds which is transmitted by free flying birds in the environment. These demands for improving the biosecurity measures at farm level including proper disposal of farm mortality and other wastes along with the inclusion of zoos and wild life parks in the MG surveillance programme. For the purpose of doing surveillance of MG in different pet, game and free flying birds a total of 12 samples each of peacocks, pheasants, ducks, pigeons, parrots, and house crows were included in the first ever study of its nature in Pakistan. During the study, the relevant samples along with recording clinical and postmortem findings were subjected to sero-prevalence, culture isolation and PCR system. Further PCR being more sensitive proves to be a better epidemiological tool. Seropositive findings revealed in peacocks, pheasants, ducks, pigeons, parrots, and crows were 66.7%, 58.3%, 41.7%, 41.7%, 16.7% and 16.7% respectively with some free flying birds giving ambiguous reactions. Whereas in the same order the culture/isolation positive results were recorded as 25%, 16.7%, 8.3%, 16.7%, 16.7%, and 25%. The samples were further confirmed on the basis of 732 bp product in PCR system. High rate of prevalence of MG in the pet, game and free flying birds regardless to their clinical findings demands to improve the biosecurity measures at the farm level with the minimum interaction of these birds with commercial poultry. Further the proper and timely disposal of all sorts of carcasses contaminated litter and wasted feed in such ways that the free flying birds are denied of picking up at those wastages. Moreover, MG surveillance system including the advances diagnostic techniques in wildlife parks and zoos be devised with proper timely preventive and therapeutic measures. The study proves that a variety of birds other than chicken either with or without clinical exhibitions carry MG organism which could be the potential source of infection for commercial poultry. The routine surveillance will be done to reduce the economic losses in poultry production.

Keywords : epidemiology, Mycoplasma gallisepticum (MG), free flying birds, surveillance, PCR

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