

ISOLATION AND IDENTIFICATION OF MYCOPLASMA GALLINARUM FROM INDIGENOUS CHICKENS IN THE SUDAN

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Harbi and Khogali (1975) were the first to report on the isolation of mycoplasma from indigenous breeds of chickens in the Sudan. That isolate was identified as serotype C which is but a commensal. No other attempts at isolation were made until the present authors took the initiative to survey avian mycoplasmas on an elaborate scale in the country

The work was set up by selecting some birds with nasal discharge and laboured breathing from a group of birds brought for sale in Khartoum Town Market. We started with these birds and tried to record preliminary results because they showed symptoms typical of respiratory disease.

The birds were killed in the laboratory and swabs from their nasal sinuses and tracheal exudate were cultured directly in Mycoplasma Broth (Oxoid CM 403) and PPLO Serum Broth (Difco PPLO). The cultures were incubated at 37 C under aerobic conditions. Uniform opalescence in both media was noted in a few days and six successive subcultures onto solid and in liquid media were made. The last three subcultures were passaged in media without antibiotics to exclude a possible L-phase of bacteria.

Only one strain was identified at this stage. Its need for cholesterol was indirectly determined by a sensitivity test against digitonin by the method of Freundt et al (1973). Biochemical tests were done after Ernø and Stipkovits (1973). These essentially comprised the catabolism of urea and arginine, fermentation of glucose, reduction of tetrazolium and digestion of coagulated serum. The Growth Inhibition test was done against a hyperimmune serum to *Mycoplasma gallinarum* (strain PG 16) using the agar cup technique described by Black (1973) The formation of "Film and Spots" was detected in media prepared after Fabricant and Freundt (1967).

According to cultural and biochemical characteristics together with formation of film and spots and the clear inhibition of growth by a definite antiserum, the strain was proved to be *M. gallinarum*; an organism which although non-pathogenic is found as a secondary invader in respiratory infection. Two other strains are in the course of identification and the surveillance is in progress.

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