Prevalence of Equine Diseases in the Northern Guinea Savannah of Zaria, Nigeria

Nicodemus M. USEH¹*, Sunday B. OLADELE¹, Najume D.G. IBRAHIM¹, Andrew J. NOK² and King A.N. ESIEVO¹

¹Department of Veterinary Pathology and Microbiology, ²Department of Biochemistry, Ahmadu Bello University, Zaria, Nigeria

There is no documentation on the diseases of horses in Zaria, Nigeria. A study was therefore conducted at the Ahmadu Bello University Veterinary Teaching Hospital (ABUVTH), Zaria, Nigeria to properly document the diseases of horses in the Northern Guinea Savannah of Zaria, Nigeria. The most common disease encountered was helminthosis, accounting for 809 (82.3%) of all the diseases diagnosed. Tetanus and rabies, which were also diagnosed in horses in this study have long been recognised as major zoonoses. The public health significance of these diseases in Zaria, Nigeria is discussed. It is concluded that research should be conducted to develop parasite vaccines from parasite strains native to Zaria, Nigeria to ameliorate parasitic diseases of horses in this area.

Key words: equine diseases, helminthosis, Nigeria

Indigenous Nigerian horses have been used for polo games, pleasure riding, racing, entertainment, ceremonies and research. Over the years, these uses have encouraged horse owners in Nigeria to import exotic horses to overcome the limitations of the local breeds available [7]. There is no document on the diseases of horses in Zaria, Nigeria. A study was therefore conducted by our team at the Ahmadu Bello University Veterinary Teaching Hospital (ABUVTH), Zaria, Nigeria and clinic records over a 28-year period (1975–2003) were analyzed. A total of 2,308 horses (Nigerian, Argentine, Arabian, Sudanese and South African breeds) were presented to the ABUVTH during the period, either for treatment of ailments or routine examination. These were exercised once daily and fed hay and local bran (dusa) twice daily. Water was supplied to them ad libitum.

The diseases of horses reported in this study were diagnosed based on clinical signs, postmortem findings and laboratory investigations [6, 8]. About 1,846 (80.0%) of the total horses presented were indigenous Nigerian breeds and 462 (20.0%) were exotic breeds. Of these horses, 2,192 (95.0%) were males and 116 (5.0%) were females. About 983 (42.6%) of them were sick with various disorders. The most common disease encountered in this study was helminthosis, accounting for 809 (82.3%) of all the diseases presented. The common helminths found include: Strongyles (Strongylus spp, Triodontophorus spp), flukes (Fasciola spp, Gastrodiscus spp, Dicrocoelium spp and Paragonimus spp) and nematodes (Parascaris equorum, Oxyuris equi, Dictyocaulus arnfieldi, Setaria equina). Sick horses had lower packed cell volume (PCV) values ranging from 20–33%, than healthy horses (34–48%). This finding is consistent with established reports that gastrointestinal helminths, haemo- and ectoparasites cause anaemia and clinical disease in susceptible horses [2–5]. The low PCV in sick horses with parasitic infestations (20–33%) as opposed to their healthy counterparts (34–48%) was therefore attributed to the effect of the parasites. Severely sick horses with extreme dehydration had higher than normal PCV values ranging between 49 and 53%.

Tetanus (n=5 or 0.51%) and rabies (n=1 or 0.10%), which were also diagnosed in horses in Zaria, Nigeria,
have long been recognized as major zoonoses [1, 9]. The extent to which human beings acquire these diseases from horses in this area is not known and was not investigated in this study. It is safe to assume that the human population in this area, including horse handlers, is at risk of exposure to these diseases. Therefore, there is a need for veterinary and human public health officials to educate the community on the public health hazards of tetanus and rabies. Other disorders of horses diagnosed in this study include: ulcerative lymphangitis (n=7 or 0.71%), tumors (n=3 or 0.31%), grain overload (n=2 or 0.20%), pneumonia (n=15 or 1.53%), aneurysm (n=4 or 0.41%), ectoparasitism (n=22 or 2.24%), coccidiosis (n=12 or 1.22%), fracture (n=5 or 0.51%), osteodystrophy fibrosa (n=3 or 0.31%), hernia (n=2 or 0.20%), ruptured blood vessels (n=5 or 0.51%), intestinal intussusceptions/torsion/colon impaction (n=7 or 0.71%), streptothricosis (n=1 or 0.10%), gastric ulcers/enteritis/gastroenteritis/gastritis (n=11 or 1.12%), arthritis (n=2 or 0.20%), pressure sores/decubitious ulcers (n=2 or 0.20%), ruptured trachea (n=1 or 0.10%), azoturia (n=1 or 0.10%), internal bleeding of unknown etiology (n=1 or 0.10%), traumatic injuries (n=2 or 0.20%), fistulous tracts (n=1 or 0.10%), ruptured intestines (n=2 or 0.20%), abscesses (n=3 or 0.31%), cardiomypathy (n=2 or 0.20%), generalized myopathies (n=2 or 0.20%), non infectious abortion (n=2 or 0.20%), liver cirrhosis (n=1 or 0.10%), lacerated wounds (n=6 or 0.61%), post parturient paresis (n=1 or 0.10%), trypanosomiasis (Trypanosoma vivax, n=1 or 0.10%), African horse sickness (n=1 or 0.10%), and decayed tooth (n=1 or 0.10%). A few disease conditions (n=2 or 0.20%) could not be confirmed and were recorded as undiagnosed ailments.

It is concluded that helmintosisis is the major problem with horses in Zaria, Nigeria so that research should be conducted with the possibility of developing parasite vaccines from strains of helminths, haemo- and ectoparasites that are native to Zaria, Nigeria with the aim of successfully reducing their incidence and prevalence in this area.

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References