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Final Abstract Number: 47.011

Session: Zoonoses and Infections in Animals

Date: Thursday, April 3, 2014

Time: 12:45-14:15

Room: Ballroom

Dynamics of anthrax cases in Ukraine during 1970-2013V. Skrypnyk^{1,*}, A. Golovko¹, A. Skrypnyk², I. Rublenko¹¹ State Scientific-Control Institute of Biotechnology and Microorganisms, Kiev, Ukraine² Metabiota Inc., Kiev, Ukraine

Background: Over 9000 anthrax foci are registered in Ukraine with more than 4000 burials of animals died from anthrax. They are located national wide and have potential threat of animal anthrax outbreaks.

Methods & Materials: Data of State Veterinary and Phytosanitary Service of Ukraine and State Statistical Committee have been used.

Results: Preventive measures against anthrax consist mostly of total immunization of animals with spore vaccines. Mandatory vaccination of farm animals shown considerable morbidity reduction. Over the past 30 years the major number of outbreaks was observed in 1979 (33 outbreaks), in 1989 (32 outbreaks) and in 1994 (33 outbreaks). Since 1994 a stable decline of outbreaks number is observed. In 2008, 2009, 2011 and 2013 no animal anthrax cases have been registered in Ukraine. A tendency towards decline of outbreaks is observed along with reduction of livestock susceptible to anthrax. Thus, amount of cattle has been decreased by 20368.1 thousands over 1990-2010 years in Ukraine, which makes 80.85%; pigs - by 12370.1 thousands of heads (62.02%) and small ruminants - less by 7170.6 thousands (79.65%). Over the past decade anthrax was registered among cattle (250 heads), small ruminants (14 heads), pigs (17 heads), horses (7 heads), mink (18 heads) and 1 wild animal.

In general during 1979-2012 years anthrax outbreaks were observed in 234 regions and city councils which is 44.5% from general number of regions and city councils in Ukraine. Herewith in the territory of 287 regions (55.5% from general number) anthrax outbreaks were not observed.

Conclusion: Effective antiepidemiologic measures against anthrax are applied in Ukraine, which reduced number of anthrax foci in country in general, and revealed tendency towards reduction of anthrax outbreaks number along with decrease of livestock susceptible to anthrax which possibly might have contributed to improvement of epidemiologic situation.

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Avian influenza, newcastle disease antibodies and antigens in apparently healthy wild birds in Kaduna State, NigeriaA. Assam^{1,*}, P.A. Abdu², A. Owoade³, A. Ezealor¹, L. Sa'idu¹¹ Ahmadu Bello University, Zaria, Nigeria² Ahmadu Bello University, Zaria, Zaria, Nigeria³ University of Ibadan, Ibadan, Nigeria

Background: Studies on avian influenza (AI) and Newcastle disease (ND) focus on waterfowls. Study surveyed AI and ND antibodies and antigens in birds in live wild bird markets (LWBMs), live poultry markets (LPMs) and free flying (FF) in Kaduna State from March to June, 2012.

Methods & Materials: Materials and Methods

ELISA used to detect influenza A antibodies while AI H5- and H7-subtype and ND antibodies were detected using HI test. ND and AI antigens were detected using PCR.

Results: Of 157 ELISA screened birds, representing 35 species of 27 families, 9.2% had AI antibody. Exposed species were *Pychonotus barbatus*, *Ardea cinerea*, *Numida meleagris*, *Streptopelia senegalensis*, *Anas platyrhynchos* and *Ciconia ciconia*. The AI antibody prevalence was 4.4, 17.1 and 20% in free flying birds (FFB), LPM and LWBM respectively. All ELISA positive birds were negative for H5- and H7-subtype antibodies. Of 196 birds tested for ND antibodies comprising 31 families and 50 species, ND prevalence was 20.4% with mean titre of $8.03 \pm 0.27 \log_2$ and 75.0% of sero-positive birds having antibody titre $\geq 7 \log_2$. Family and species ND antibody prevalence was 45.2% and 34% respectively. Among the ND sero-positive families, 85.7% (12/13) had ND antibody titre $\geq 7 \log_2$. Species with ND antibodies were *Coracias abyssinicus*, *Amaurornis flavirostris*, *Actophilornis africanus*, *Porphyrion alleni*, *Pychonotus barbatus*, *Francolinus bicalcaratus*, *Camaroptera brachyura*, *Numida meleagris*, *Streptopelia senegalensis*, *Anas platyrhynchos*, *Passer griseus*, *Ciconia ciconia*, *Torgos tracheliotus*, *Lamprolornis chloropterus*, *Buphagus africanus*. ND antibody prevalence was 14.6% in FFB, 9.8% in LPM and 27.8% in LWBMs. Of 300 birds tested for AI and ND antigen comprising 35 families and 62 species neither antigen was detected.

Conclusion: First report of AI antibody in *Pychonotus barbatus*, *Ardea cinerea*, *Streptopelia senegalensis* and *Ciconia ciconia* in Nigeria. Wild birds in Kaduna State were exposed to AI and ND antigens with *Numida meleagris*, *Pychonotus barbatus* and *Streptopelia senegalensis* likely bridge species. *Ciconia ciconia* and *Ardea cinerea* can introduce AI into Nigeria. Surveillance of AIV in wild birds in Nigeria should include LWBMs and FF birds.

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