Putative human and avian risk factors for avian influenza virus infections in backyard poultry in Egypt.

Basma M. Sheta et al.

Highly pathogenic influenza A virus subtype H5N1 causes significant poultry mortality in the six countries where it is endemic and can also infect humans. Egypt has reported the third highest number of poultry outbreaks (n = 1084) globally. The objective of this cross- sectional study was to identify putative risk factors for H5N1 infections in backyard poultry in 16 villages in Damietta, El Gharbia, Fayoum, and Menofia governorates from 2010–2012. Cloacal and tracheal swabs and serum samples from domestic (n = 1242) and wild birds (n = 807) were tested for H5N1 via RT-PCR and hemagglutination inhibition, respectively. We measured poultry rearing practices with questionnaires (n = 306 households) and contact rates among domestic and wild bird species with scan sampling. Domestic birds (chickens, ducks, and geese, n = 51) in three governorates tested positive for H5N1 by PCR or serology. A regression model identified a significant correlation between H5N1 in poultry and the practice of disposing of dead poultry and poultry feces in the garbage (F = 15.7, p < 0.0001). In addition, contact between domestic and wild birds was more frequent in villages where we detected H5N1 in backyard flocks (F = 29.5, p < 0.0001).

**Citation:**

**Basma M. Sheta**, Trevon L. Fuller, Brenda Larison, Kevin Y. Njabo,Ahmed Samy Ahmed, Ryan Harrigan, Anthony Chasar, Soad Abdel Aziz, Abdel-Aziz A. Khidr, Mohamed M. Elbokl, Lotfy Z. Habbak, Thomas B. Smith (2013): Putative risk factors for avian influenza virus infections in backyard poultry in Egypt. Veterinary Microbiology , 168 (2014) 208–213.