

Occurrence of antibiotic resistant campylobacter in wild birds and poultry

ABSTRACT

Aims: Campylobacter is a major cause of gastroenteritis in humans worldwide, particularly in developed countries and is reported to show an increased trend in antibiotic resistance. The purpose of this study was to determine the occurrence of Campylobacter in wild birds, poultry and in poultry environments in Selangor, Malaysia as well as to determine the rate of antibiotic resistance among Campylobacter isolates from poultry and wild birds. **Methodology and results:** The wild birds were trapped near poultry farm areas and in open areas which were more than 5 km away from poultry farms (referred to as open environment). Of 57 birds trapped near the farm's environment, 17.5% were positive for Campylobacter and out of these, 90% were *C. jejuni*. Of a total of 77 birds in the open environment, 22.1% were positive for Campylobacter and 88.7% were *C. jejuni*. The poultry farms consisted of 3 chicken and 2 duck farms. About 60% of the chickens and 44.8% of the ducks were positive for Campylobacter of which 80% were *C. jejuni*, while 20% were *C. coli*. The Campylobacter isolates were subjected to antibiotic susceptibility test using disk diffusion method against 12 antibiotics. All the isolates (100%) from wild birds around poultry houses were resistant to at least one antibiotic. **Conclusion, significance and impact of study:** The findings showed 93% of the isolates from wild birds were resistant to at least two antibiotics. Campylobacter isolates from poultry in the farms were resistant to at least one antibiotic. The antibiotic resistant Campylobacter is of public health importance.

Keyword: Antibiotic; Resistance; Campylobacter; Poultry; Wild birds