

Occurrence of antibiotic resistant *C. jejuni* and *E. coli* in wild birds, chickens, environment and humans from Orang Asli villages in Sungai Siput, Perak, Malaysia

ABSTRACT

In developing countries, *Escherichia coli* and *Campylobacter jejuni* were found to be the prominent bacterial causes of gastroenteritis in human gastroenteritis, and they also showed an increased trend towards antibiotic resistance. Thus, the study aimed to determine the occurrence of *E. coli* and *C. jejuni* in wild birds, chickens, human and environment in villages in Perak and to determine the antibiotic resistance amongst *E. coli* and *C. jejuni* isolates. Three Orang Asli villages in Perak were chosen. Wild birds were trapped from nearby areas of the villages. We collected 52 human stool samples, 40 cloacal swabs from wild birds and 42 from chickens. For the environment, samples were collected from water (40 samples), flies (40 samples) and soil (40 samples). Two (5%) flies and 16 (38.1%) chickens were found positive for *C. jejuni*. Also, a total of 50 (96.2%) humans, 40 (100%) birds, 40 (95.2%) chickens were positive for *E. coli* and 111 (92.5%) of the 120 environmental samples tested positive for *E. coli*. The disk diffusion method was employed to determine the susceptibility of *C. jejuni* and *E. coli* isolates against ten antibiotics. All of the *E. coli* (100%) and *C. jejuni* (66%) isolates were found resistance towards at least one antibiotic. Hundred percent (100%) of the *E. coli* isolates obtained from wild birds were found to show multidrug resistance (MDR). *Campylobacter jejuni* isolates from flies and chickens showed high resistance towards nalidixic acid.

Keyword: Antibiotics; *Campylobacter jejuni*; *Escherichia coli*; Chickens; Wild birds and human