OCCURRENCE OF CAMPYLOBACTER SPP. AND ARCOBACTER SPP. IN GOATS

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Abstract

Arcobacter spp. and Campylobacter spp. belong to the family Campylobacteraceae but they differ in that Arcobacter can grow at temperature below 30 °C and aerotolerance. Campylobacter is a zoonotic foodborne pathogen and can be divided into thermophilic and non-thermophilic Campylobacter. Thermophilic Campylobacter has become a major cause of bacterial gastroenteritis. Arcobacter is an emerging group of zoonotic foodborne and waterborne pathogens in which there are about 13 recognised species. To date, limited studies have been done in Malaysia to determine the occurrence of these bacteria in goats. Twenty goats each from 3 different goat farms in Selangor, Malaysia were randomly selected. Two sets of rectal swabs were collected from each goat. One set of the rectal swab was placed in Cary Blair transport medium and the other set agitated in Arcobacter broth. Isolation and identification were done in order to isolate Campylobacter and Arcobacter spp. from the samples. For Campylobacter spp., the samples were cultured via direct plating to the CCDA. Out of the 60 goats, 9 (15%) goats were positive for Campylobacter spp. of which 5 (8.33%) were C. jejuni and 4 (6.67%) were C. coli. For Arcobacter spp., enrichment in Arcobacter broth followed by culture on the blood agar was done. Nine (15%) goats were found positive for Arcobacter spp. This study showed that the occurrence of Campylobacter spp. and Arcobacter spp. in goats were low, but prevention and control measures are still needed to be taken into consideration because both bacteria have zoonotic importance.

Keywords: goats, occurrence, Campylobacter spp., Arcobacter spp.