

Prevalence of *Campylobacter jejuni*, isolated from Bovine meat and dairy products, from Addis Ababa and nearby towns, Ethiopia

A technical Report

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Prevalence of Thermophilic *Campylobacter* spp isolated from raw meat and dairy products, from Addis Ababa and nearby towns, Ethiopia

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Abstract

Background *Campylobacter* is major cause of gastroenteritis in human throughout the world. It is caused by contaminated or undercooked food or contaminated water. There are also a number of more serious illnesses that occasionally follow infection including the paralytic Guillain–Barré syndrome, an autoimmune disease that affects the peripheral nervous system.

Thermotolerant *Campylobacter* species are distinct from most of other campylobacters by their high optimum growth temperature (42°C). The main pathogens are *Campylobacter jejuni*, *C. coli*, *C. lari*, and *C. upsaliensis*. The incidence of campylobacteriosis become increasing nowadays and turned to be the leading cause of bacterial enteritis in both developing and developed countries.

Objective; The objective of this study is to isolate *Campylobacter jejuni* from Bovine meat and dairy products and to assess the prevalence data

Methods; 200 food samples have been purchased from food vendors, shops and supermarkets from March to June 2006 and analyzed using a conventional culture techniques. The isolated *Campylobacter* species were further confirmed and species identification was done based on Biochemical isolation technique.

Result; Among 200 samples 57 (28.5%) of them were found to be *Campylobacter* species based on biochemical testing. *Campylobacter jejuni* was isolated from 11 (5.5%) food samples. *Campylobacter spp* were isolated from all sites with the highest percentage in Nazareth town, 12 (6%), followed by Ambo town and Lafto subcity which were 11 (5.5%) and 10 (5%) respectively. On the other hand, *Campylobacter jejuni* was isolated only from 6 sites and the leading percentage was obtained from Ambo town 6 (3%), followed by Yeka sub city, which is 2 (1%).

Conclusion: *Campylobacter* is one of the most frequently occurring bacterial agents of gastroenteritis. The true incidence of gastroenteritis due to *Campylobacter* spp. is poorly known. In this study, it was proved that it is prevalent in those specific sites which also indicate it is present in most parts of the country, especially in those areas which have

hottest climatic conditions and poor hygienic environments. Therefore, better personal and environmental hygienic protection is recommended, to the community, for the reduction of Campylobacter infection in our daily life, which this in turn plays a major role in public protection from outbreaks occurrence and severe diseases consequences as the result of this organisms.