

Campylobacteriosis in Cattle in Iran

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Summary: A study on natural campylobacter infection in cattle in Iran was carried out in 1986 to 1989 at the Razi Institute. A total of 1166 fetuses and 1600 milk samples from cattle were examined bacteriologically and *Campylobacter* sp. was isolated from 50 (4.2%) fetuses and 8(0.5%) milk samples. All isolates were classified by typing procedures and were *Campylobacter fetus* subsp. *fetus* from fetuses and *Campylobacter jejuni* from milk samples.

Keywords: *Campylobacter* / *Cattle diseases* / *IRAN*

Introduction

Campylobacter fetus subsp. *fetus* is now recognised as an important cause of bacterial abortion and infertility in cattle (3). The first isolate of *Campylobacter fetus* subsp. *fetus* in cattle in Iran dates back to 1980 (Zoghi and Ebadi unpublished data). Since then, this organism has been isolated on numerous occasions from bovine fetus.

Campylobacter jejuni is now recognised as an important cause of diarrheal illness in human and animals (2,4,10,11). In Iran, *Campylobacter jejuni* was identified as a causal agent of calves diarrhea in 1986 (9). This paper represents the isolation of *Campylobacter fetus* subsp. *fetus* from bovine fetus and *Campylobacter jejuni* from bovine milk.

Materials and Methods

Between 1986 to 1989, a total of 1186 fetuses from cattle were examined. Samples of spleen, liver, lung and abomasal content of all fetuses were inoculated onto agar plates containing blood serum dextrose medium with antibiotics and campylobacter blood agar plates (1,6). All plates were incubated at 37°C. in an atmosphere of 10% carbon dioxide, 5% oxygen and 85% nitrogen for the growth of *Campylobacter fetus* subsp. *fetus*.

At the same time, a total of 1600 milk samples from dairy cattle were obtained. All samples were inoculated on blood agar plates and blood-serum dextrose agar with antibiotics (1,6). All plates were incubated at 42°C. in an atmosphere of 10% carbon dioxide, 5% oxygen and 85% nitrogen suitable for *Campylobacter jejuni* growth.

After 48 to 72 hours, all suspected colonies were tested for identification, using procedures as recommended by Izat et al and Bawa et al (3,7).

Results

Out of 1186 fetuses obtained from cattle between 1986 to 1989, 50 (4.2%) cases were bacteriologically positive for campylobacteriosis. All isolates were identified as *Campylobacter fetus* subsp. *fetus*.

At the same time, 1600 milk samples from cattle were also investigated for *Campylobacter* infection, out of which 8(0.5%) cases were positive. These organisms were identified as *Campylobacter jejuni*.

Discussion

Isolation of *Campylobacter fetus* subsp. *fetus* from the tissues and abomasal content of aborted fetuses in cattle in Iran, strongly suggested that campylobacteriosis should be considered in the differential diagnosis of cattle abortion.

Animal sources have been proved to be involved in cases of *Campylobacter jejuni* infections in man (2,4,5). Also, raw milk had been implicated in cases of

Campylobacter infections (8,10,12).

Because unpasteurized milk is consumed in some communities, the public health importance of this study is therefore evident.

Acknowledgements

We would like to express thanks to Mr. M. Emami, Mrs. Z.Bashir-Hashemi and Mrs.Kh.Kobari for their technical assistance.

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