18.004

Prevalence of Cryptosporidiosis in Calves and Humans to be in Contact Them in Tabriz Area in Iran

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Cryptosporidium species are frequently associated with diarrhea among patients and dairy herds are a possible source of some of these infections. The environmental distribution *Cryptosporidium spp*. is dependent upon human and animal sources. This study examined parasite prevalence in calves and humans to be contact them in Tabriz area in Iran. Fecal samples were collected from 482 calves and 86 humans in the dairy farms. *Cryptosporidium* oocysts were identified by using sheather's concentration and the Ziehl-Neelsen modified staining technique in 31 of 482 calves (6.43%) ranging from less than 6 months of age and 5 of 86 humans (5.81%) ranging from less than 1 year of age to older than 52 years of age. This study was achieved in 6 farms. Overall prevalence of infection was 5.81%, but higher in calves 4—6 months of age (7.13%) and this was statistically significant ($P < 0.05$). Both sexes of calves were infected with Cryptosporidium parasites, but prevalence were higher in diarrheic than in non-diarrheic calves. There was no association between the detection of Cryptosporidium and other gastrointestinal parasites. These results indicate that Cryptosporidium is enzootic among calves, and suggest that calves could have a role in zoonotic cryptosporidiosis.

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18.005

Development of a Multi-Locus Sequence Typing Scheme for *Laribacter hongkongensis*, A Novel Bacterium Associated with Freshwater Fish-Borne Gastroenteritis and Traveler's Diarrhea, Revealed "Pathogenic" Strains

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Background: In 2001, we discovered *Laribacter hongkongensis*, a novel genus and species, facultative anaerobic, Gram-negative, motile, urease-positive, S-shaped rod that belongs to the *Neisseriaceae* family. In a multi-centered prospective study, we showed that *L. hongkongensis* was associated with community-acquired gastroenteritis and traveler's diarrhea, with freshwater fish as the reservoir of the bacterium. *L. hongkongensis* is globally distributed, as travel histories from patients suggested that it is present in at least four continents, including Asia, Europe, Africa and Central America.

Methods: A multilocus sequence typing (MLST) system was developed for *L. hongkongensis*. The system was used to characterize 146 *L. hongkongensis* strains, including 39 human and 107 fish isolates. Fragments (362—504 bp) of seven housekeeping genes were amplified and sequenced.

Results: Among the 3068 bp of the seven loci, 332 polymorphic sites were observed. The median number of alleles at each locus was 34 [range 22 (*ilvC*) to 45 (*thiC*)]. All seven genes showed very low *dn*/*ds* ratios of <0.04, indicating that no strong positive selective pressure is present at all seven loci. A total of 97 different sequence types (STs) were assigned to the 146 isolates, with 80 STs identified only once. The overall discriminatory power was 0.9861. eBURST grouped the isolates into 12 lineages, with six groups containing only fish isolates and three groups only human isolates. Standardized index of association (I^S_A) measurement showed significant linkage disequilibrium in both human and fish isolates, indicating a lack of evidence of recombination in both populations. The I^S_A for the human and fish strains were 0.270 and 0.636, indicating the fish strains were more clonal than the human strains.

Conclusion: The clustering of fish and human isolates into different groups observed in both pulsed field gel electrophoresis and MLST studies suggested that some clones of *L. hongkongensis* could be more virulent than others.

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18.006

***Coxiella burnetii* Endometritis and Metritis in Cows**

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A purposeful study was carried out for the presence of *C. burnetii* upon endometrites and metrites in cows from dairy farms with reproductive disorders.

Serologically-CFT, MIFT were tested 1498 cows from 16 settlements in 4 districts. Specific *C. burnetii* antibodies were detected in 335 (22,36%). In cases of acute and chronic endometrites most frequently as a result of Q-rickettsial miscarriage and retained placenta, the endometrial secretions contained Coxiella in high concentration. The agent was detected by light, immunofluorescent and electron microscopy. Three strains of *C. burnetii* were isolated in chicken embryos/CE/from genital discharges of cows affected by endometritis. The pathogen was isolated as well from a fatal case of septic metritis by inoculating yolk sacs of CE with suspensions of uterus tissues and separately from spleen and liver of the cow.

The four strains in CE were adapted to cultivation in cell line BHK-21 and the primary cell culture of chicken embryonal fibroblasts. The results confirm the etiological role of *C. burnetii* in endometrites, metrites and reproductive disorders in cattle.

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18.007

Antimicrobial Susceptibility of Pathogenic *Escherichia coli* Isolated from Diarrheic Cattle

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Pathogenic *E. coli* such as Shiga toxin-producing *E. coli* (STEC) and Attaching and Effacing *E. coli* (AEEC)