



International Journal of Veterinary Sciences and Animal Husbandry

ISSN: 2456-2912
VET 2018; 3(4): 01-02
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www.veterinarypaper.com
Received: 01-05-2018
Accepted: 02-06-2018

Akshay Sharma
PhD Scholar, Department of Veterinary Gynecology and Obstetrics, College of Veterinary and Animal Sciences, Himachal Pradesh Agricultural University, Palampur, Himachal Pradesh, India

Madhumeet Singh
Professor and Head, Department of Veterinary Gynecology and Obstetrics, College of Veterinary and Animal Sciences, Himachal Pradesh Agricultural University, Palampur, Himachal Pradesh, India

Pravesh Kumar
Assistant Professor, Department of Veterinary Gynecology and Obstetrics, College of Veterinary and Animal Sciences, Himachal Pradesh Agricultural University, Palampur, Himachal Pradesh, India

Nirdeshika Chaudhary
Veterinary Officer, Department of Veterinary Gynecology and Obstetrics, College of Veterinary and Animal Sciences, Himachal Pradesh Agricultural University, Palampur, Himachal Pradesh, India

Correspondence
Akshay Sharma
PhD Scholar, Department of Veterinary Gynecology and Obstetrics, College of Veterinary and Animal Sciences, Himachal Pradesh Agricultural University, Palampur, Himachal Pradesh, India

Clinical management of puerperal uterine infection in a cow caused by *Edwardsiella tarda*

Akshay Sharma, Madhumeet Singh, Pravesh Kumar and Nirdeshika Chaudhary

Abstract

Edwardsiella tarda infection, an uncommon pathogen mostly associated with pet reptiles and the ingestion of raw fish. Present case report envisages the successful management of *Edwardsiella tarda* isolated from the uterine discharge of a Jersey cow 3 weeks after parturition. This may be the first report of puerperal uterine infection caused by *E. tarda* in a cow.

Keywords: *Edwardsiella tarda*, puerperal uterine infection, jersey cow

Introduction

Edwardsiella tarda, a gram-negative bacillus, is widely distributed in the aquatic environment which mainly affects feral and farmed fish (Mikamo *et al.* 2003) [3]. The infection is associated with severe septicemia and lethality in a broad host range, which includes humans and gastrointestinal disorders are mostly observed in immunocompromised hosts (Kebede *et al.* 2016) [1]. *E. tarda* has caused septicemia, meningitis, peritonitis, osteomyelitis, tubo-ovarian abscess, and liver abscesses in fish and humans (Tamada *et al.* 2009) [4], but no reports of puerperal uterine infection in domesticated large animals have been reported to date.

Case details

A pluriparous Jersey cow aged 6 years was presented in Teaching Veterinary Clinical Complex, CSKHPKV, Palampur with a history of pus mixed uterine discharge at 3 weeks after parturition. Cow also had a history of post-partum uterine prolapse. For diagnostic purpose, the uterine discharge was collected in a sterile vial and streaked on McConkey's Lactose Agar for identification. Thereafter, purified colonies were streaked on Xylose Lysine Deoxycholate (XLD) agar and various biochemical tests like catalase, oxidase, Indole production, Hydrogen sulphide, Citrate utilization and motility tests (Table 1) were done to confirm the presence of *Edwardsiella tarda*.

Table 1: Phenotypic and biochemical characteristics of *Edwardsiella tarda*

Parameter	Results
Cultural characteristics on XLD agar	Small, circular, grayish white colonies
Morphological characteristics	Gram negative, motile short rods
Biochemical characteristics	
Indole production	+
H ₂ S production	+
Oxidase	-
Catalase	-
Citrate	-
Dulcitol	-
Sorbitol	-
Xylose	-

Culture sensitivity test was also done for the pathogen against some anti-bacterial drugs. Levofloxacin, Ciprofloxacin and Ceftriaxone were found sensitive to the pathogen whereas Penicillin, Amoxicillin, Streptomycin, Cloxacillin, Ampicillin, Cephalexin were completely resistant. As a part of treatment, Inj. Ciprofloxacin @ 5mg/kg body weight (C-Flox Power; Intas Pharmaceuticals Ltd.) was administered for 5 days to the cow. Success of the treatment was judged on the basis of estrus (after 3 months) and conception with first insemination.

Discussion

The genus *Edwardsiella* is genetically distinct from other members of the *Enterobacteriaceae*. Three species of the genus *Edwardsiella* are recognized; *E. hoshinae*, *E. ictaluri*, and *E. tarda*. *E. tarda* is the most common species and was first described in 1965. Although it exists in a variety of environmental and animal sources, *E. tarda* is predominantly found in freshwater and fish (Kebede *et al.* 2016)^[1]. It mainly causes gastroenteritis with acute watery diarrhea with a dysentery-like course (Leung *et al.* 2012)^[2]. Uterine infection in the immediate postpartum period may have predisposed to the development of clinical disease due to immunosuppression (Mikamo *et al.* 2003)^[3]. *E. tarda* can cause enteric disease in the bovine species due to consumption of contaminated products but source of uterine infection is still unknown.

References

1. Kebede B, Habtamu T. Isolation and Identification of *Edwardsiella tarda* from Lake Zeway and Langano, Southern Oromia, Ethiopia. Fisheries and Aquaculture Journal, 2016; 7(4):1-6.
2. Leung KY, Siame BA, Tenkink BJ, Noort RJ, Mok YK. *Edwardsiella tarda*-Virulence mechanisms of an emerging gastroenteritis pathogen. Microbes and Infection. 2012; 14:26-34.
3. Mikamo H, Ninomiya M, Sawamura H, Tamaya T. Puerperal intrauterine infection caused by *Edwardsiella tarda*. Journal of Infection and Chemotherapy. 2003; 9:341-343.
4. Tamada T, Koganemaru H, Matsumoto K, Hitomi S. Urosepsis caused by *Edwardsiella tarda*. Journals of Infection and Chemotherapy. 2009; 15:191-194.