

Accepted Manuscript

Blackleg in cattle: Current understanding and future research perspectives- A review

M.A. Idrees, M. Younus, S.H. Farooqi, A.U. Khan

PII: S0882-4010(18)30247-X

DOI: [10.1016/j.micpath.2018.04.047](https://doi.org/10.1016/j.micpath.2018.04.047)

Reference: YMPAT 2926

To appear in: *Microbial Pathogenesis*

Received Date: 11 February 2018

Revised Date: 21 April 2018

Accepted Date: 23 April 2018

Please cite this article as: Idrees MA, Younus M, Farooqi SH, Khan AU, Blackleg in cattle: Current understanding and future research perspectives- A review, *Microbial Pathogenesis* (2018), doi: 10.1016/j.micpath.2018.04.047.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Blackleg in cattle: Current understanding and future research perspectives- A Review**M. A. Idrees¹, M. Younus¹, S. H. Farooqi^{2*}, A. U. Khan³**

1. Department of Pathobiology, KBCMA, College of Veterinary and Animal Sciences, 51600-Narowal.
2. Department of Clinical Studies, KBCMA, College of Veterinary and Animal Sciences, 51600-Narowal.
3. Department of Pathobiology, College of Veterinary and Animal Sciences, 35200-Jhang.

*Corresponding author:

shahid.farooqivet@gmail.com

ABSTRACT

Blackleg is an endogenous acute infection that principally affects cattle. The disease is caused by *Clostridium chauvoei* (*C. chauvoei*), an anaerobic spore forming bacterium. Control of this disease is based on stringent husbandry measures and scheduled vaccination plan. In recent years, the major virulence factors of *C. chauvoei* have been discovered and described. However, the pathogenesis of blackleg in cattle and in particular, circulation of the pathogen from point of entry to target tissues is yet not fully elucidated. This review summarizes the latest review of literature that significantly contributed for understanding the disease in cattle, and provides a foundation to preventive strategies.

Key Words: *Clostridium chauvoei*, virulence factors, Pathogenesis, cattle.

1. Introduction:

Blackleg, also known as black quarter is generally a fatal myonecrosis of young cattle (Useh et al., 2006b). The causative agent (*C. chauvoei*) of blackleg is a gram positive, motile, histo-toxic, and sporulating anaerobic bacterium (Quinn et al., 2011). The disease is acute and is spread globally among ruminants, causing significant losses in livestock production systems (Frey & Falquet, 2015). Although, blackleg vaccination has been carried out since 1930, sporadic outbreaks are still recorded annually worldwide (Useh et al., 2006b). In 1782, Chabert differentiated between blackleg and anthrax on the basis of symptomatic and pathological features (Kriek & Odendaal, 2004). Despite, blackleg is one of the oldest known diseases affecting cattle, but there are important gaps in the understanding of this disease, especially,

Download English Version:

<https://daneshyari.com/en/article/8749445>

Download Persian Version:

<https://daneshyari.com/article/8749445>

[Daneshyari.com](https://daneshyari.com)