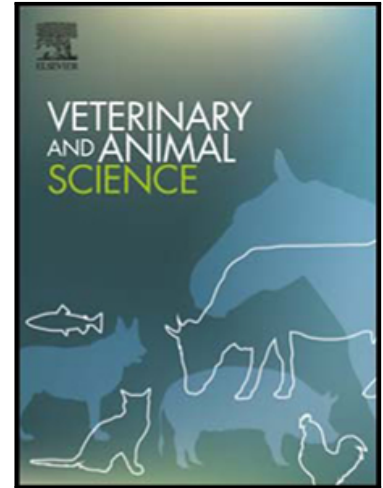


Accepted Manuscript

Typing of *Campylobacter jejuni* isolated from poultry on the basis of flaA-RFLP by various restriction enzymes

Rahul Yadav , Jyotika Yadav , Sunil Maherchandani ,
Sudhir Kumar Kashyap

PII: S2451-943X(17)30178-3
DOI: [10.1016/j.vas.2018.06.003](https://doi.org/10.1016/j.vas.2018.06.003)
Reference: VAS 25



To appear in: *Veterinary and Animal Science*

Received date: 18 December 2017
Revised date: 19 April 2018
Accepted date: 19 June 2018

Please cite this article as: Rahul Yadav , Jyotika Yadav , Sunil Maherchandani ,
Sudhir Kumar Kashyap , Typing of *Campylobacter jejuni* isolated from poultry on the ba-
sis of flaA-RFLP by various restriction enzymes, *Veterinary and Animal Science* (2018), doi:
[10.1016/j.vas.2018.06.003](https://doi.org/10.1016/j.vas.2018.06.003)

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.

Typing of *Campylobacter jejuni* isolated from poultry on the basis of *flaA*-RFLP by various restriction enzymes

Rahul Yadav^{1*}, Jyotika Yadav², Sunil Maherchandani³ and Sudhir Kumar Kashyap⁴

*corresponding author: Rahul Yadav (Email: drahul16889@gmail.com)

¹ Ph.D Scholar, Department of Veterinary Microbiology and Biotechnology, CVAS, RAJUVAS, Bikaner (Rajasthan), India

² MVSc Scholar, Department of Veterinary Medicine, COVS, LUVAS, Hisar (Haryana), India (drjyotika2910@gmail.com)

³ Professor, Department of Veterinary Microbiology and Biotechnology, CVAS, RAJUVAS, Bikaner (Rajasthan), India (smchandani86@gmail.com)

⁴ Professor and Head, Department of Veterinary Microbiology and Biotechnology, CVAS, RAJUVAS, Bikaner (Rajasthan), India (kashyapskk@gmail.com)

ABSTRACT

RFLP analysis of the flagellin (*flaA*) gene was compared using three different restriction endonucleases *i.e.* *DdeI*, *HinfI* and *DpnII* to determine the genetic diversity among 43 *Campylobacter jejuni* isolates of poultry origin from the same geographical area. *flaA* gene was amplified in all the isolates and RFLP analysis showed variations. *DdeI*-based RFLP was found most efficient in discriminating *C. jejuni* isolates by generating 15 different *DdeI*-RFLP patterns with discriminatory index (D.I) of 0.9258 whereas *DpnII* produced seven *DpnI*-RFLP patterns (D.I.= 0.8427). While *HinfI* enzyme produced only six *HinfI*-RFLP patterns (D.I.= 0.6977). The discrimination of *DpnI*-RFLP was comparable to discrimination given by *DdeI*-RFLP analysis, which is generally used to study *flaA* gene RFLP.

KEYWORDS: *C. jejuni*, poultry, *flaA* RFLP, *dpnII*, *ddeI*

1. INTRODUCTION

Campylobacter species are the second most emerging bacterial zoonotic pathogen after *Salmonella* causing gastroenteritis (Silva et al., 2011; Epps et al., 2013). Of the many *Campylobacter* species identified, *Campylobacter jejuni* (*C. jejuni*) is the most predominant pathogen implicated in food borne infections followed by *Campylobacter coli* (*C.coli*) (Coward et al., 2008; Biswas et al., 2011; Wiczorek and Osek, 2013; Bolton, 2015). Caeca of the chickens is frequently colonized by this organism and consumption of broiler meat and its products contaminated during production and processing is considered to be the most frequent source of infection (Pearson et al., 1993; Aydin et al., 2007; Wirz et al., 2010).

Download English Version:

<https://daneshyari.com/en/article/8486840>

Download Persian Version:

<https://daneshyari.com/article/8486840>

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