

*Campylobacter jejuni*

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*Campylobacter jejuni*

**Some of Pathological Aspects of *Campylobacter jejuni* Isolated  
from Diarrhoeal Cases in Children**

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**ABSTRACT**

The study aimed to elucidating some pathogenecity factors of *Campylobacter jejuni* isolated from sever diarrhoeal cases from children at age of less than two years old, due

to the association between this bacterium and these cases .The factors studied included such its adherence to eucaryotic cells by using oral epithelial cells isolated from human. The bacterium showed ability of adherence on these cells. The ability to produce enterotoxin and its effect through injection intraperitoneally in the mice was also investigated. after three days the mice were killed and histological sections were prepared from small intestine , large intestine and liver .The microscopical results for these sections showed vascular degeneration in the cytoplasm of hepatocytes and lymphocytic perivascular cuffing surrounded the central vein , as well as dilatation of the lumen, In small intestine there is atrophy of villi, severe coagulative necrosis in epithelial lining of the mucosal layer and infiltration of inflamentary cells while in large intestine there was elongation of some villi and atrophy in others. Infiltration of inflamentary cells was also noticed.

Campylobacteriosis      *Campylobacter jejuni*

.(Zanbransky, 1997; Black, 1993)

% 1 Church, )	Campylobacter (Tauxe, 1992) Symptomatic	Campylobacteriosis  (1995) 100  Asymptomatic  %39
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.(Bennett and Plum, 1996)

.(Walker et al., 1986)

*C.jejuni*

*Vibrio cholerae*

.(Pancorbo et al., 2001, Suzuki et al., 1994) E.coli

Cytolethal Distending (CDT)

Chines hamster (CHO)

toxin

*C. jejuni*

.HeLa

HEP-2

ovary

.(Pikett et al., 1966)

*C.jejuni*

enterotoxin

152

Cary-blair -

Preston

transport medium

Campylobacter blood free medium

72-48 ° 42

**:Adherence Test**

)

*C.jejuni*

: (

- (Cruickshank et al., 1975) Phosphate Buffer solution (PBS)

-

.(Gurr, 1962) Giemsa stain

:Epithelial cells

-

7 PBS

/ 5000

PBS

PBS

.(Ofek et al., 1986)

: Preparation of bacterial suspension

*C. jejuni*

Brain Heart Infusion Broth (BHI) -

24 ° 37

<sup>3</sup> / CFU 10<sup>7</sup> <sup>3</sup> / CFU 10<sup>6</sup> PBS

.(Cruickshank et al., 1975) Plate count method

<sup>3</sup> (5)

PBS

° 37

15

20 %30

.(Van-Den Bosch et al., 1980)

**:Detection of Enterotoxin test**

(Pancorbo et al., 2001)

*C.jejuni*

Enterotoxin

PBS

24

.PBS <sup>3</sup> / CFU 10<sup>11</sup>

Casamino

acid yeast extract broth

20 g 800 High Speed 18 MSE England

0.22 (Millipore filter)

..... *Campylobacter jejuni*

intraperitoneally

<sup>3</sup> 0.1

PBS

<sup>3</sup> 0.1

6-4

% 10

—

.(Whitehead et al., 1972)

(9)

206

152

% 4.36

*C.jejuni*

% 6.2

2000

Seanz

%10

(Salih and Al-Saad, 1994)

*C. jejuni*

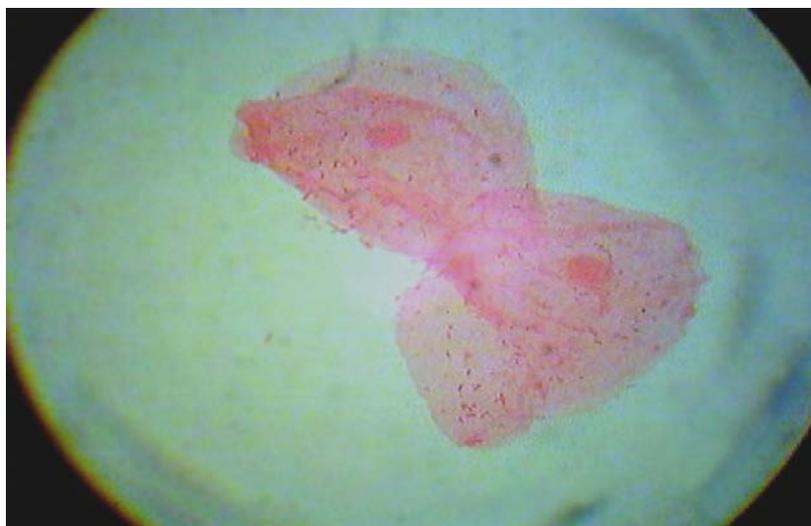
(1)

.(McSweegan and Walker, 1986)

Adhesin

Receptor

.(Kenneth, 2002)



.(100X)

*C. jejuni*

:1

*C.jejuni*

(Virella, 1997)

flagellin

1993

Grant

*C.jejuni*

*C.jejuni*

LPS

.(McSweegan and Walker, 1986)

*C.jejuni*

LPS

*C.jejuni*

(Lee et al., 1989)

*C. jejuni*

.(DeMelo and Pachere., 1988; Lee et al., 1989)

:

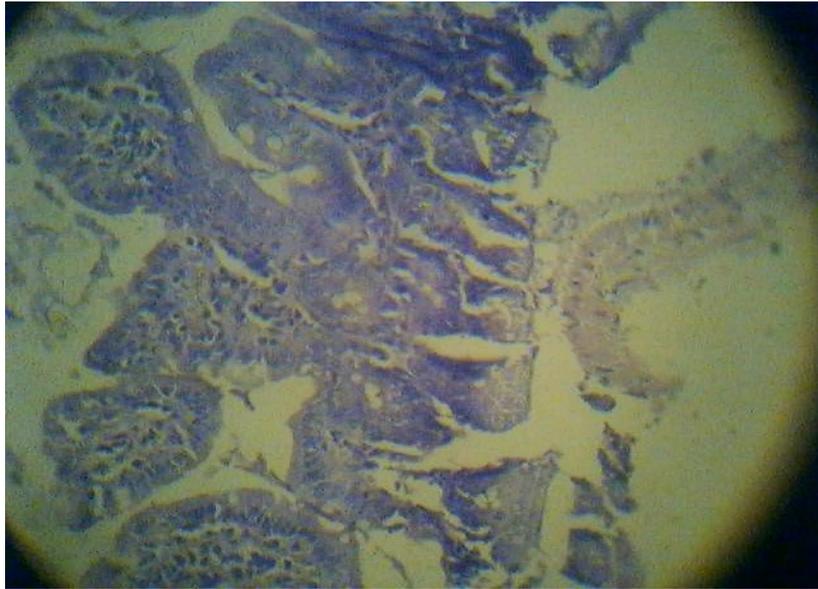
:

( )

.(2)

:

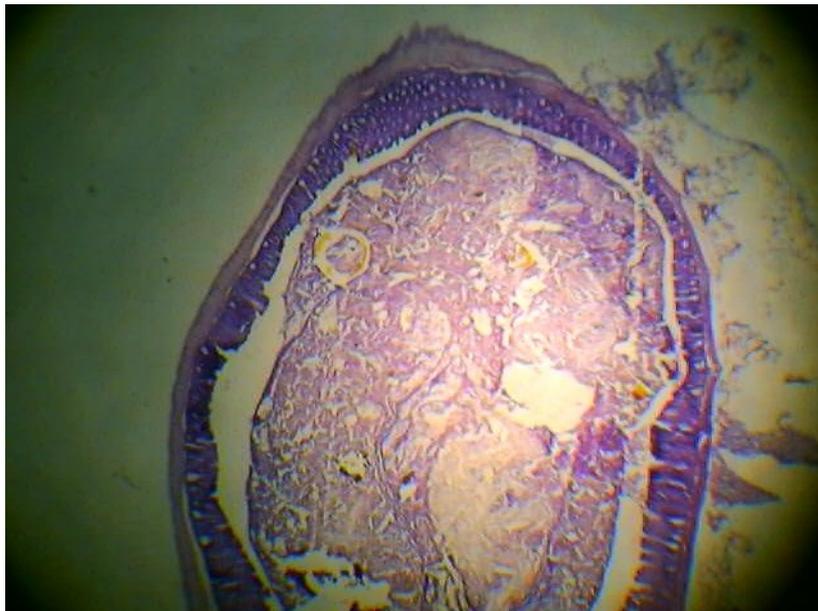
.(3)



*C. jejuni*

:2

.(400X)



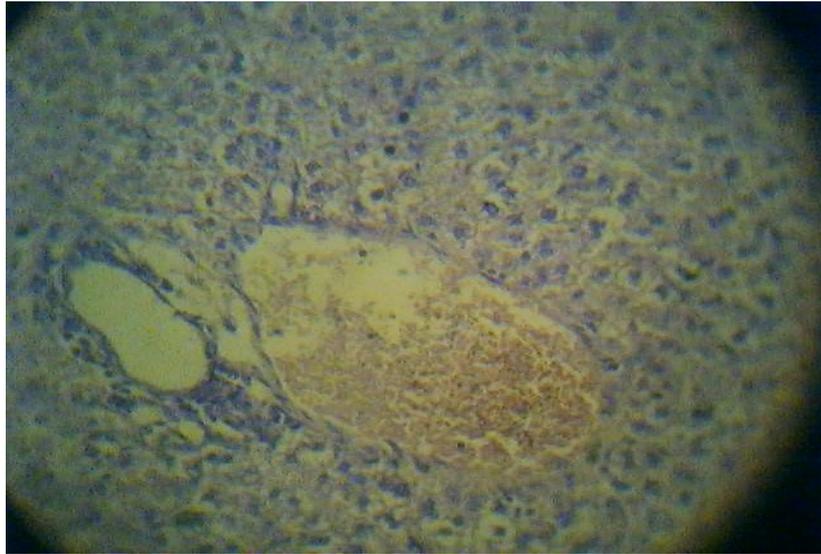
72 *C. jejuni*

:3

.(400X)

Vacuoler degeneration

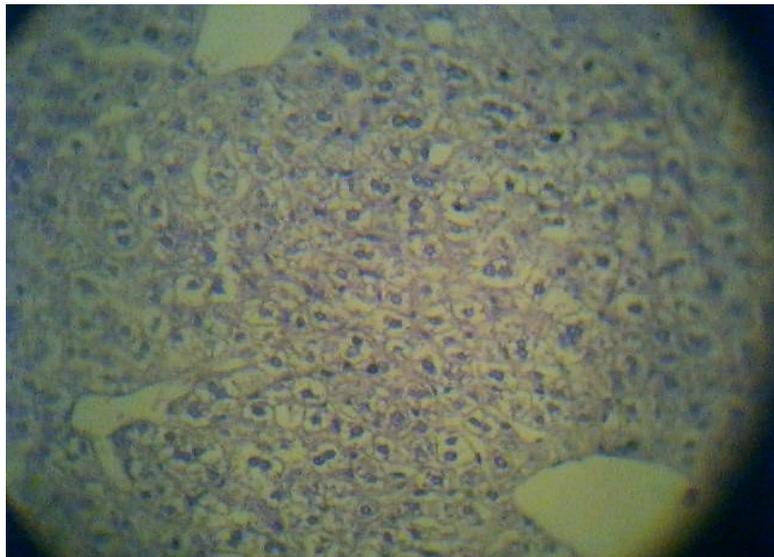
:



72

:4

.(400X)



72

:5

.(400X)

*C. jejuni*

Ketty, )

.(1997

### Chemical mediators

Irritant

Inflamed area

.Tumor necrosis factor

.(McFarland and Neil., 1992)

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