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OCCURRENCE OF CAMPYLOBACTER JEJUNI IN DIARRHOEIC AND NON-DIARRHOEIC CHILDREN IN SÃO PAULO, BRAZIL

Heriberto FERNÁNDEZ (1), M. Regina F. TOLEDO (1), Ulysses FAGUNDES NETO (2) and Luiz R. TRABULSI (1*)

SUMMARY

Campylobacter jejuni was looked for in the feaces of 262 children, beeing 189 with acute diarrhoea, 31 with chronic diarrhoea and 42 controls. The organism was isolated from 14 (7.4%), 2 (6.5%) and 6 (14.3%) of the children, and each group, respectively.

INTRODUCTION

During the last decade, **Campylobacter jejuni** (formerly known as **Campylobacter fetus** subsp. **jejuni**) has emerged as a common agent of acute gastroenteritis [4,7]. Although this organisms was known for many years as an animal pathogen, it was not until 1973, in Belgium, that it was first shown to be a common cause of diarrhoea in humans [6].

Since then, **C. jejuni** has been isolated practically all over the world [4,7], and the isolations by RICCIARDI et al. [13] was the first reported from Latin-America.

In this note we report the occurrence of **C. jejuni** in feaces of 262 diarrhoeic and non-diarrhoeic children aged 1 month to 6 years in the city of São Paulo, Brazil.

The children were divided into 3 groups:
i) **Control group:** 42 well nourished children followed in the.

ii) **Acute diarrhoea group:** 189 children with watery diarrhoea, probably of infectious etiology, with a duration of less than 10 days.

iii) **Chronic diarrhoea group:** 31 children with diarrhoea lasting over 2 weeks, or more than 2 attacks of diarrhoea in a period less than 3 months.

Each feacal sample was seeded in in a Butzler medium plate and incubated for 48 hours at 42°C under microaerophilic conditions obtained by using the GasPak system (BBL) without the catalyst [7].

Suspected colonies were examined for vibrio-like organisms by Gram-staining and confirmed by motility in phase-contrast microscopy, positive catalase and oxidase reactions, ability to grow at 42° and 37° but not at 25°C, and by sensitivity to nalidixic acid and resistance to caphalothin [11].

C. jejuni was isolated from 22 (8.4%) of the 262 children examined, of which 6 (14.3%) were normal, 14 (7.4%) had acute diarrhoea and 2 (6.5%) had chronic diarrhoea (Table I).

C. jejuni was isolated in the 3 groups of children under study and the overall isolation rate of 8.4% falls within the ranges reported in previous surveys [1,2,6,14,15].

In children with acute diarrhoea, the microorganism was isolated in 7.4% of the cases,

(1) Present address of senior author: Institute of Clinical Microbiology; Faculty of Medicine; Universidad Austral de Chile; Valdivia — Chile

(2) Department of Microbiology, Immunology and Parasitology, Escola Paulista de Medicina, São Paulo (1), and Setor de Gastro-Pediatria (2), Escola Paulista de Medicina. Rua Botucatu, 862, 3.º andar, Vila Clementino. CEP 04023, São Paulo, Brazil

rate that is similar to that obtained by SKIRROW in England [14]. However it is lower than those found in developing countries [1,2,5] but higher than that reported by RICCIARDI et al. [13], in Rio de Janeiro.

The incidence of **Campylobacter** isolations (6.5%)) in children with chronic diarrhoea was lower than that reported by these Brazilian Authors [13]. Considering that the review of the literature did not provide more data on the isolation of this bacteria from stools of chronic diarrhoeic patients, it would be necessary to conduct further studies in order to establish a possible role of **C. jejuni** in chronic diarrhoeic process. It could be particularly important in patients with tropical enteropathy, in which certain enterobacteria are isolated from jejunal aspirates, and which malabsorption is regularly present [9,10]. Because of its ability to multiply in bile [3], **C. jejuni** could proliferate in the bile-rich small intestine producing like **Escherichia coli, Klebsiella pneumoniae** or **Enterobacter cloacae**, the malabsorption process observed in tropical enteropathy. In one experiment, malabsorption of sugars was demonstrated in mice inoculated with **C. jejuni** [12]. On the other hand, **C. jejuni** was previously isolated from jejunal aspirates of a child with chronic diarrhoea but not from acute diarrhoeic children [8]. In our study, the 2 children with chronic diarrhoea, in which **Campylobacter** was found in stools, also had tropical enteropathy, and in one of them, the organism was also isolated from jejunal aspirate.

Contrasting with European and American findings [4,6,14], we found that the isolation rate of **C. jejuni** in normal children (14.3%) is high, but is in agreement with the results obtained in tropical developing countries [1,2,5]. This fact complicates the interpretation of the isolation of **Campylobacter** in children with diarrhoea, opening a new question related to the pathogenic mechanisms of this bacteria. On the other hand, the role of socioeconomic conditions in influencing and determining the distribution of **C. jejuni**, is an aspect that must be elucidated for a better understanding of the epidemiology of **Campylobacter** enteritis.

T A B L E I

Isolation of **Campylobacter jejuni** from diarrhoeic and non-diarrhoeic children

Children	Number of faecal cultures			Positivity (%)
	Positive	Negative	Total	
Non-diarrhoeic	6	36	42	14.3
With acute diarrhoea	14	175	189	7.4
With chronic diarrhoea	2	29	31	6.5
Total	22	240	262	8.4

RESUMO

Ocorrência de Campylobacter jejuni em crianças com diarréia e normais em São Paulo, Brasil

Campylobacter jejuni foi pesquisado nas fezes de 262 crianças, sendo 189 com diarréia aguda, 31 com diarréia crônica e 42 sem sintomatologia gastrintestinal. A bactéria foi encontrada em 14 (7,4%), 2 (6,5%) e 6 (14,3%) das crianças, em cada um dos grupos, respectivamente.

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