

Analysis of carriage and transmission of Clostridium difficile

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2003 Fiscal Year Final Research Report Summary

Analysis of carriage and transmission of Clostridium difficile

Research Project

Project/Area Number

14570233

Research Category

Grant-in-Aid for Scientific Research (C)

Allocation Type

Single-year Grants

Section

一般

Research Field

Bacteriology (including Mycology)

Research Institution

KANAZAWA UNIVERSITY

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Project Period (FY)

2002 - 2003

Keywords

Clostridium difficile / CDAD / Molecular epidemiology / PCR ribotyping / PFGE typing / Continuously colonization / Intestinal colonization / Hospital outbreak

Research Abstract

In addition of the last year, another one group of healthy individuals(n=33,age range,20-29) was examined for colonization of Clostridium difficile a total of 3 times at intervals of 3 months. Isolates were analyzed by PCR ribotyping and pulsed-field gel electrophoresis(PFGE) to investigate the colonization status

of C.difficile. Moreover, intestinal microflora of C.difficile-positive and -negative subjects was compared. 1.Colonization of C.difficile : C.difficile was isolated from nine(9.1%) of 99 samples. Colonization rates were 9.1% at all three examinations and were similar to those in previous study. Among the four positive subjects, the number of subjects from whom C.difficile was isolated once, twice, three times was two, one and one, respectively. 2.Colonization status of C.difficile : All nine isolates from four specimens were analyzed by PCR ribotyping and PFGE. C.difficile of the same PCR ribotype/PFGE type of were isolated from three subjects. The PCR ribotype/PFGE type of the isolated from a subject at the another examination was changing. 3.Comparison of intestinal micro flora : Composition of fecal micro flora was compared in C.difficile-positive(n=12) and -negative(n=12) subjects. C.difficile-positive subjects were significantly more densely colonized by enterococci than C.difficile-negative subjects. These results suggest that colonization of healthy individuals by C.difficile is transient in many cases, however, indicates that there are healthy individuals who were continuously colonized by C.difficile. Moreover, these data suggest that dense colonization of the intestine by enterococci may be associated with C.difficile colonization.

Research Products (4 results)

All Other

All Publications (4 results)

[Publications] Eijiro Ozaki: "Clostridium difficile colonization in healthy adults : transient colonization and correlation with enterococcal colonization"Journal of Medical Microbiology. 53 · 2. 167-172 (2004) ▼

[Publications] 喜多 裕之: "社会集団としての学生集団におけるClostridium difficileの消化管保有および伝播"防菌防黴誌. 32 · 3. 105-113 (2004) ▼

[Publications] Eijiro Ozaki: "Clostridium difficile colonization in healthy adults : transient colonization and correlation with enterocoecal colonization"Journal of Medical Microbiology. 53-2. 167-172 (2004) ▼

[Publications] Hiroyuki Kita: "Intestinal colonization and transmission of Clostridium difficile among students as a cimmunity"Boukin Boubai. 32-2. 105-113 (2004) ▼

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