

# 가 Acyclovir

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= Abstract =

## Post-Exposure Prophylaxis of Varicella in Family Contact by Oral Acyclovir

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**Purpose :** To determine whether varicella can be prevented by administration of oral acyclovir(ACV) during the incubation period of the disease.

**Methods :** Starting 9 days after exposure to the index case in their families, ACV(40 mg/kg/day in four divided doses) was given orally to 20 exposed children for 5 days. Their clinical features were compared with those of 20 control subjects. Antibody titers to VZV were measured in both group 1 week and 4 weeks after finishing the oral ACV administration.

**Results :** The mean age of family members with varicella(51.4 months) were significantly high compared to that of ACV prophylaxis group(28.5 months) and control group(31 months) ( $P<0.05$ ). Among the 12 children with ACV prophylaxis who completed follow up blood sampling, nine children were diagnosed as VZV infection on the serologic test(75%). Among them six children showed positive VZV IgM on the first blood sample and two children showed seroconversion to positive IgM on the second test after ACV prophylaxis. One child who was negative on both IgM and IgG, showed positive IgG on the second test. The incidence of fever and severity of skin rashes were significantly low in children received oral ACV than in the control group. No or reduced number of maculopapular eruption were observed in the oral ACV group compared to multiple vesicles of the control group.

**Conclusion :** In the present study, we observed that oral ACV prophylaxis to the family contacts is effective in reducing severity of skin lesion. It is likely that oral ACV 9 days after contact prevents or reduces blood dissemination of VZV. Little is known about clinical effect and immunity to the virus in exposed children with no varicella symptom after treatment. We propose the checking up antibody to VZV some period after oral ACV, and con-

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sidering vaccination to whom with no antibody. But further more studies are needed to practical application of oral ACV for the postexposure prophylaxis of varicella.

**Key Words :** Varicella, Varicella zoster virus, Prophylaxis, Acyclovir, Family contact

72

ACV 가

Varicella zoster virus(VZV)

1.

1996 3 1997 7 가

, Reye ,

가

10

21

14 16

<sup>1)</sup>, 가

80 90%

<sup>2)</sup>,

<sup>3)</sup>.

가

72

zoster immune globulin

(ZIG)<sup>4)</sup> <sup>6)</sup>

<sup>6)</sup>, <sup>7)</sup>

가

24 48

<sup>1)</sup>

가

2.

1)

14

가

5

24

acyclovir

9

2

(ACV)

<sup>8)</sup>, <sup>9)</sup>,

가

9

ZIG

Acyclovir 40 mg/kg/ 4

5

72

VZV

ACV

<sup>10)</sup> <sup>16)</sup>

6

(0 ), 1 10

1

가

(1 ), 11 50 (2 ), 51 100 (3 ), 101

ZIG

500 (4 ) 501 (5 )

, 가

2) 0.05

가 2 , 1 4 ,

- 70 가 20 가

가 1 4 2

VZV IgM IgG 5 VZV IgG

Enzygnost<sup>®</sup> Anti-VZV/IgM Enzygnost<sup>®</sup> Anti-VZV/ 3

IgG(Behringwerke AG, Marburg, Germany) 12 20

2

가 ,

5.14(34 109), 28.5(7 70) 31(8 75)

3) 1:0.67, 1:1.14 1:1

VZV VZV IgM (P<0.05).

, VZV IgG가 VZV VZV

12 9 (75%) ACV

IgM

Table 1. Results of Post-exposure Prophylaxis of Varicella in Family Contacts by Oral Administration of Acyclovir

Case No	Study group								Index case			
	Age (mon)	Sex	Fever	Grade of skin rash <sup>†</sup>	1st sample		2nd sample		Age (yr)	Sex	Fever	Grade of skin rash
					VZV <sup>+</sup> IgM	VZV <sup>+</sup> IgG	VZV IgM	VZV IgG				
1	19	F	-	0	1.67	1.11	-	3.8	3	M	+	5
2	16	F	-	2	-	-	2.5	3.84	4	F	+	3
3	28	F	-	0	-	-	-	-	4	F	+	4
4	19	M	-	0	1.69	-	-	3.06	5	F	+	4
5	7	F	-	0	1.08	-	-	2.57	3	M	+	5
6	35	M	-	0	1.01	-	2.24	3.37	6	M	+	5
7	24	F	-	0	-	-	1.36	3.61	4	M	+	3
8	12	F	-	0	-	-	-	-	6	F	-	3
9	15	M	-	2	1.56	-	-	2.97	9	F	+	5
10	35	F	-	2	1.92	-	-	-	9	F	+	5
11	24	M	-	0	-	-	-	3.58	5	M	+	4
12	70	M	-	0	-	-	-	-	4	M	+	3
13	41	M	-	0	-	4.89	-	5.12	5	M	+	4
14	18	F	-	0	-	2.9	-	3.21	4	M	+	5
15	69	F	-	0	-	5.42	-	5.19	4	M	+	5

<sup>†</sup>Case No 13-15 who were already immuned were excluded when they were compared to control group

<sup>†</sup>VZV(Varicella zoster virus) IgM, IgG by Enzyme Immunoassay : cutoff point >1.0

<sup>†</sup>Grades of skin rash : 0, no skin lesion; 1, 1-10; 2, 11-50; 3, 51-100; 4, 101-500; 5, >501



ACV

Yoshikawa  
가

<sup>15)</sup>

17

ACV  
2

:

Varicella zoster virus(VZV)

, 80 90%  
72 zoster

immune globulin(ZIG)

가 24 48

가

72

가

ACV

가

VZV

가

Lin <sup>14)</sup>

: 1996 3 1997 7 가

가

VZV

가 9

Acyclovir 40 mg/kg/ 4

5

가

ACV

6

VZV IgM , VZV IgG가  
가

VZIG가

1

4

VZV

ACV

:

20

가

ACV

12

20

3

VZIG

51.4 , 28.5

31

ACV

VZV

(P<0.05).

VZV

12

가

9 (75%) ACV

VZV

ACV

IgM

6 3

가 2

가

VZV IgM

가 8

IgM, IgG

IgG가

가 1

12

3 (25%) 2  
 20 15 (75%),  
 3 17 (85%)  
 가  
 3 가  
 1  
 : ACV  
 가 7  
 ACV 가  
 5  
 1  
 9 ACV  
 가  
 VZV  
 ACV  
 가  
 VZV

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