

= Abstract =

### Epidemics of Lower Respiratory Tract Infection that Occurred to Children at a Local Institute for Children's Adoption and Welfare

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**Purpose :** We analyzed clinical features and causal viruses of acute lower respiratory tract infections(LRTIs) in order to improve the management of these infections.

**Methods :** From end of April to early May 2001, amongst 30 children at a local institute for children's adoption and welfare, 13 were admitted to the hospital with the diagnostic impression of acute LRTIs. Nasopharyngeal aspirates were sent in Seoul National University Hospital for viral culture of respiratory syncytial virus(RSV), adenovirus, parainfluenza virus.

**Results :** One or more viral agents were identified in 4 cases(30.7%) : were RSV(15.4%), adenovirus(7.7%), and a mix of these two viruses(7.7%). Initial symptoms were fever(69%), cough(100%), tachypnea(54%), chest retraction(69%), rale(85%) and wheezing(15%). Leukocytosis was noted in 23%, CRP increased more than 10 mg/L in 46%. Chest X-ray abnormalities were 69%.

**Conclusion :** Although viruses were identified in 30.7%, further studies should be made for prevention and treatment of acute viral LRTIs.

**Key Words :** Epidemics, Acute lower respiratory infections, Children living in institute of adoption and welfare

15~25% <sup>1~3)</sup>.

1

20~30% 4, 5).

(croup), (treacheobronchitis),

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\* 2001

가  
respiratory syncytial

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virus( RSV), adenovirus, parainfluenza virus, influenza virus

20~50% 가 3)  
6, 7), 가 13

1.  
2001 4 5 15  
13 30  
가 9 , 가 4  
28  
2

2.  
1)  
, RSV, adenovirus, parainfluenza virus

2)  
HEp-2 (human epidermoid carcinoma cell), (37°C) (CO2 incubator) 1~2  
HEp-2 HEp-2  
2 10  
, (RSV, parainfluenza virus, adenovirus, influenza A, B), 37°C  
30 , phosphate buffered saline(PBS) 10 3  
, (FITC) 37°C  
30 , PBS

10 3 ,  
3)  
13

1.  
13 4 (30.7%) 가  
RSV 2 (15.4%), adenovirus 1 (7.7%), RSV adenovirus mixed infection 1 (7.7%) , parainfluenza virus 9 (69.2%) 가  
(Fig. 1).

2.  
가 4  
RSV  
2 1 7 , 1  
36 , adenovirus  
10 , adenovirus RSV  
4  
RSV 1

가 4  
RSV  
2 1 7 , 1  
36 , adenovirus  
10 , adenovirus RSV  
4  
RSV 1

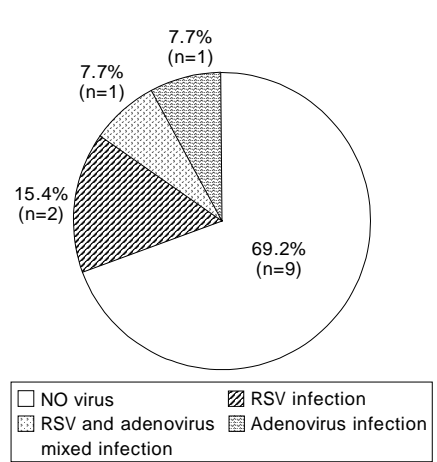


Fig. 1. Isolation rates of viruses.

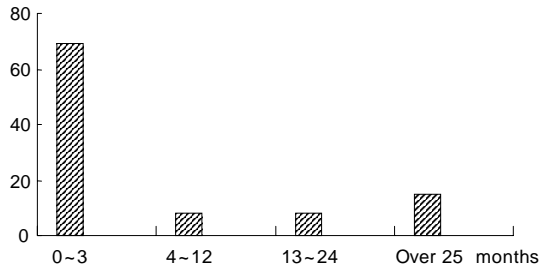


Fig. 2. Distribution of age.

Table 1. Initial Symptoms and Signs

Symptoms and signs	No. of cases(%)
Fever	9/13( 69%)
Cough	13/13(100%)
Tachypnea	7/13( 54%)
Chest wall retraction	9/13( 69%)
Rale	11/13( 85%)
Wheezing	2/13( 15%)

Table 2. Laboratory Findings

	No. of cases(%)
Increased WBC	3/13(23%)
Increased CRP(>10 mg/L)	6/13(46%)
Abnormal radiologic findings	9/13(69%)

가 ,  
 가 .  
 3.  
 0~3 9 , 4~12  
 1 , 13~24 2 , 25  
 1 (Fig. 2).  
 4.  
 69%, 100%,  
 54%, 69%, 85%,  
 15% (Table 1).  
 5.  
 가  
 , 3 가 가  
 . CRP 가 10 mg/L  
 6 CRP 가  
 9 (Table 2).  
 6.  
 1)  
 3 ,  
 5 ,  
 가 1 ,  
 4 . 가  
 ,  
 가

2)  
 . 13  
 ,  
 2 11 .  
 3)  
 2 6  
 3 .  
 5 1,000  
 99%가  
 , 70%가  
 200 8).  
 가 가  
 , , ,  
 가 , 가 , ,  
 ,  
 가 가  
 9-11)

12).  
 가 RSV, Influenza virus 5  
 adenovirus, parainfluenza virus, influenza virus 8), parainfluenza virus  
 가 parainfluenza type I 23).  
 RSV 13~15).  
 가, 가,  
 6  
 , 2  
 가 가  
 70% 가 RSV 90,000 2 60 , 2  
 가 RSV 12 50 , 12 40  
 16, 17). RSV  
 ELISA 가  
 16) Van Woensel 17) 8, 24, 25).  
 RSV corticosteroid가 가  
 , RSV cortico-  
 steroid가 , RSV 가 8), Jaye 26)  
 6~8 C- (CRP), (ESR),  
 corticosteroid  
 18). RSV . C-  
 가 , ,  
 , 5 가 ,  
 2 3 40% 20 mg/L 가 ,  
 , 12 , 6 가 C-  
 19, 20). 4 . , C- 40 mg/L  
 5 RSV가 , 1991 가  
 RSV 21).  
 Adeno virus 가 . Putto 27)  
 1953 91%가 , 59%  
 39℃ , 37%  
 22). 1~5  
 ,  
 가 , adeno 4  
 virus가 2 가 .

가 , azithromycin 가  
 cin 3 5 azithromy-  
 josamycin 7 ,  
 amoxicillin/clavulanic acid, cefaclor, cefuroxime axe-  
 til, erythromycin 10

28, 29)

: 2001 4 5

가 9 4

30

, 가

13

respiratory syncytial virus( RSV), adenovirus,  
 parainfluenza virus

1) 13 4 가  
 30.7% RSV

30)  
 가  
 31, 32)

2 (15.4%), adenovirus 1 (7.7  
 %), RSV adenovirus 1 (7.7%)  
 parainfluenza virus

2) 가 4

가 가  
 33)

3) 0~3 9 , 4~12  
 1 , 13~24 2 , 25  
 1

가

4) (69%), (100%),  
 (54%), (69%), (85%),  
 (15%)

34)

5) 3 (23%), C- 6 (46  
 %) 10 가 ,  
 9 (69%)

, 3~4  
 3

33)

30 ,

: 30.7%

가 ,

가

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