

interleukin-6 in cerebrospinal fluid: association with clinical outcome for children with bacterial meningitis. *Clinical Infectious Diseases* 25: 328-329.

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TABLE 1. Clinical features of patients with influenza-virus-associated encephalopathy

Patient no.	Age/Sex	GCS ^a	Convulsion	Cerebrospinal fluid			Serum			Mortality and mobility
				Cell count (/ μ L)	Protein (mg/dL)	AST ^b (IU/L)	ALT ^c (IU/L)	NH ₃ (μ g/dL)		
1	2y/F	11	yes	2	24	92	24	18	recovery	
2	2y/M	12	yes	15	27	49	15	34	recovery	
3	2y/M	13	yes	0	13	26586	13879	74	recovery	
4	2y/M	12	yes	6	21	56	41	53	recovery	
5	3y/M	3	yes	0	57	18088	10472	50	sequelae	
6	5y/M	3	yes	6	20	1276	1667	37	sequelae	
7	6y/F	3	yes	NA ^d	NA	32	14	NA	recovery	
8	6y/F	11	no	0	10	39	17	NA	sequelae	
9	11y/M	11	no	NA	NA	200	72	NA	sequelae	
10	11y/M	11	yes	3	23	35	13	21	recovery	
11	13y/F	3	yes	NA	NA	10510	3160	NA	death	

^aGCS, Glasgow Coma Scale.

^bAST, aspartate aminotransferase.

^cALT, alanine aminotransferase.

^dNA, not applicable.

TABLE 2. Results of RT-PCR in patients with influenza-virus-associated encephalopathy

Samples	Patients	Controls
Throat swab	9/9	29/29
Plasma	0/11	0/29
PBMC ^a	1/9	0/29
Erythrocytes	0/9	0/29
CSF ^b	1/11	ND ^c

^aPBMC, peripheral blood mononuclear cells.

^bCSF, cerebrospinal fluid.

^cND, not done.

TABLE 3. Cerebrospinal fluid concentrations of TNF- α , sTNF-R1, IL-1 β , and IL-6 in patients with influenza-virus-associated encephalopathy

Patient no.	TNF- α ^a (pg/mL)	sTNF-R1 ^b (pg/mL)	IL-1 β ^c (pg/mL)	IL-6 (pg/mL)
1	NA ^d	NA	NA	NA
2	NA	NA	NA	NA
3	<15	1196	<4	324 ^f
4	<15	2934	NA	<31.2
5	<15	1848	<4	<31.2
6	NA	NA	NA	NA
7	<15	555	<4	<31.2
8	<15	433	<4	<31.2
9	<15	553	<4	<31.2
10	<15	635	<4	<31.2
11	NA	NA	NA	NA
Normal range	<15	836 \pm 402 ^e	<4	<31.2

^aTNF- α , tumor necrosis factor- α .

^bsTNF-R1, soluble tumor necrosis factor receptor 1.

^cIL, interleukin.

^dNA, not applicable.

^eMean \pm SD.

^fUnderscores represent the level considered abnormal.

TABLE 4. Plasma concentrations of TNF- α , sTNF-R1, IL-1 β , and IL-6 in patients with influenza-virus-associated encephalopathy

Patient no.	TNF- α ^a (pg/mL)	sTNF-R1 ^b (pg/mL)	IL-1 β (pg/mL)	IL-6 (pg/mL)
1	NA ^d	NA	NA	NA
2	NA	NA	NA	NA
3	<31.2	2232	<8	860 ^f
4	<31.2	810	30.2	18.2
5	<31.2	702	<8	<12.5
6	NA	426	<8	<12.5
7	<31.2	760	<8	<12.5
8	<31.2	869	<8	100
9	<31.2	>5000	<8	1295
10	<31.2	745	<8	<12.5
11	<31.2	270	21.1	<12.5
Normal range	<15.6	1020 \pm 495 ^e	<4	<12.5

^aTNF- α , tumor necrosis factor- α .

^bsTNF-R1, soluble tumor necrosis factor receptor 1.

^cIL, interleukin.

^dNA, not applicable.

^eMean \pm SD.

^fUnderscores represent the level considered abnormal.

TABLE 5. Comparison of the percentage of patients exhibiting plasma cytokines

Cytokines (pg/mL)	Patients (%) (n=9)	Controls (%) (n=29)	p
TNF- α ^a	0 (0)	0 (0)	1.00
sTNF-R1 ^b	2 (22)	1 (3)	0.13
IL-1 β ^c	2 (22)	2 (7)	0.23
IL-6	4 (44)	12 (41)	0.58
IL-6 (≥ 100)	3 (30)	0 (0)	0.01

^aTNF- α , tumor necrosis factor- α .

^bsTNF-R1, soluble tumor necrosis factor receptor 1.

^cIL, interleukin.

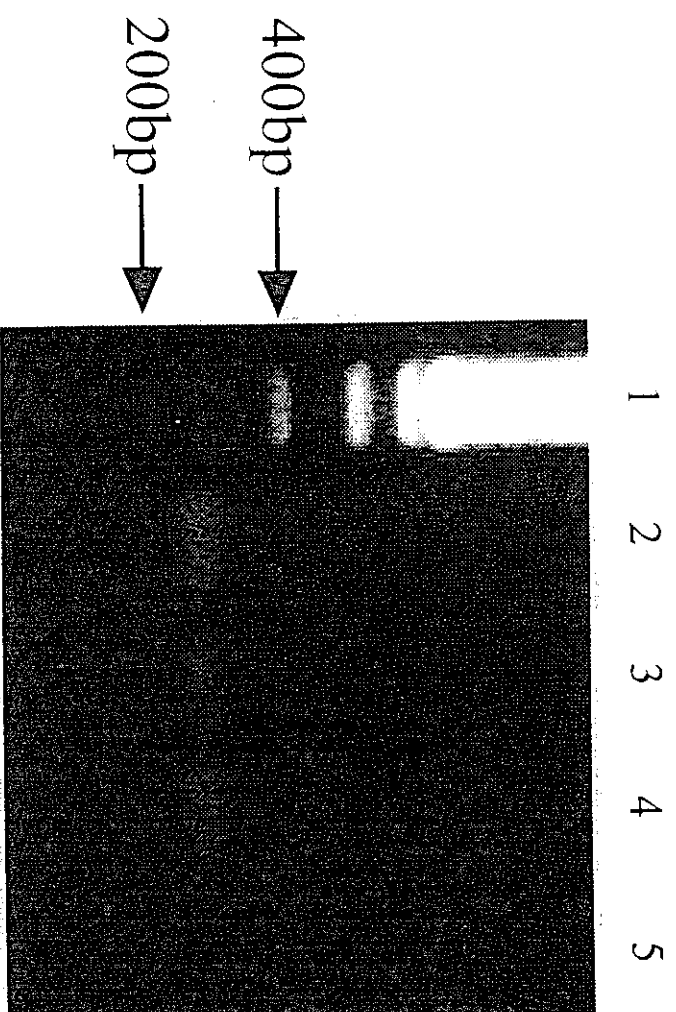


Fig. 1. Sensitivity of the RT-PCR in detecting influenza virus NS gene. Lane 1, 200bp DNA marker ladder; lanes 2 to 4, 3×10^2 , 3×10^1 , 3 copies of NS gene, respectively; lane 5, no template control.