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## The Relationship between Febrile Convulsion and Temporal Lobe Epilepsy : Is Febrile Convulsion a Preferential Association with Temporal Lobe Epilepsy ?

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**Background** : Although a history of febrile convulsion (FC) is common in epilepsy patients, the preferential association of febrile convulsion with temporal lobe epilepsy (TLE) is not clear. **Methods** : We obtained the FC data from "Paik and Bongsang hospital " epilepsy clinic. We classified epilepsy syndromes into generalized epilepsy (GE), temporal lobe epilepsy (TLE), extratemporal epilepsy (ETLE), unclassified partial and undetermined epilepsy by standardized criteria. The incidence of antecedent FC was evaluated in relation to the epilepsy classifications. We calculated kappa values for inter and intra observer reliability for the classifications of epilepsy syndromes. **Results** : The agreement of epilepsy classifications were reliable (intra-observer kappa value=0.78, inter-observer kappa value=0.77). Thirteen percent of the studied patients (72/537) had a history of FC and 38% of FC (27/72) were complex types of FC. TLE was more likely to be preceded by FC 25% (42/166) than ETLE 6% (12/189),  $p<0.05$  or GE 13% (12/93),  $p<0.05$  and 85% of complex FC (23/27) preceded TLE. GE however, was more likely to have non-complex FC 100% (12/12) than partial epilepsy 55% (32/58),  $p<0.05$ . **Conclusions** : We therefore conclude and agree that FC should be preferentially associated with TLE.

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**Key Words** : Febrile convulsion, Temporal lobe epilepsy, Complex febrile convulsion

(febrile convulsion) 5

가

가

(partial epilepsy)

(generalized epilepsy)

가

2 ~ 4%

2 ~ 7%

(temporal lobe epilepsy)

가

<sup>2-7</sup>

Falconer <sup>8</sup>  
febrile convulsion)

(prolonged

( )

<sup>6-11</sup>

가

35 ~ 50%

<sup>12-17</sup>

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\* 1999

500

가

가

Abou-

Berg <sup>19</sup>  
가

MRI가 possible  
MRI가

1)  
가? 2)

definite  
3 Hz spike and waves generalized spike and waves  
possible  
EEG 3 Hz spike and waves generalized spike and waves가

16

5

febrile seizure) 1) 15 (complex 2)  
3) 24 2

Kappa value intraobserver reliability  
interobserver reliability  
definite

Chi-square test, Student t-test

2

가

(semiology), (electroencephalography; EEG)  
(magnetic resonance image; MRI)  
(undetermined epilepsy)

16  
가 가  
537 . 537 438 , 99

(idiopathic generalized epilepsy, IGE)  
(cryptogenic, symptomatic generalized epilepsy)  
(extratemporal epilepsy, ETLE),  
(unclassified partial epilepsy)

Kappa value interobserver reliability  
intraobserver reliability Kappa value가 0.77, 0.78 definite  
54%,  
61%, 50%  
50%

(ictal EEG)

, MRI

definite

possible

20.9±13.3 , 9.4±8.2  
25.3±19.4 , 7.2±5.9

definite

1)

가  
가

2)

(interictal EEG)

3)

가

MRI

21.8±14.8

4) 2)+3)

8.9±7.8

17%(93/

(complex partial seizure)

537), 78%(417/537),

MRI

가

5%(27/537)

가

definite

92%(86/93)가

Possible

가

31%(166/537),

가

35%(189/537),

12%(62/537)

2. Berg <sup>19</sup> 13.2%(133/1005) 13.9%  
 13%(72/537) (73/524)  
 38%(27/72)가  
 14%(58/417) 13%(12/93) , 4,6  
 (26/417) 6.2% ger <sup>6</sup> 2.4%,  
 가 6~8%,  
 가 17~22%, 가  
 가 44%  
 가 25%(42/166) 13% , 가 , 3  
 6%(12/189) (Table 1). 가  
 (12/93) 가

3. 27 20 15 가 TLE  
 4 Lee <sup>7</sup> 362  
 15 가 2 4%가  
 24 2 15 3가 Rocca <sup>20-22</sup> , 가  
 가 18%, 21% 가 19%,  
 15 23 23 Camfield  
 ( definite 19 ) 1 15%  
 3 가 (2  
 , 1 ).  
 27 24 MRI 75%(18/24) 가 Berg <sup>19</sup>  
 (visual analysis) (hippocampal  
 sclerosis)가 가 , ,  
 12.7%, 13.6%, 13.1% 가  
 TLE 가 .  
 537  
 72 13% Abou-Khalil <sup>18</sup>

**Table 1.** The incidence of febrile convulsion in generalized epilepsy, TLE, ETLE, unclassified partial and undetermined epilepsy

Epilepsy classification	Number	FC(%)	Complex FC	F.Hx of FC
Generalized epilepsy	93	12(13)	0	2
TLE*	166	42(25)	23	1
ETLE	189	12( 6)	1	0
Unclassified partial epilepsy	62	4( 6)	2	1
Undetermined epilepsy	27	2( 7)	1	1
Total	537	72(13)	27	5

\*p<0.05, between TLE and ETLE, generalized epilepsy

p>0.05, between TLE and generalized epilepsy

p>0.05, between TLE and partial epilepsy

\*p<0.05, complex FC between generalized and partial epilepsy

TLE ; Temporal lobe epilepsy, ETLE ; Extratemporal lobe epilepsy, FC ; febrile convulsion,

F.Hx of FC ; family history of febrile convulsion

interobserver reliability 0.77  
 intraobserver reliability가 0.78  
 가

가 14% 13%  
 가  
 25%(42/166),  
 6%, 13% Abou-Khalil<sup>18</sup>  
 25.2%, 5.6%,  
 11%  
 가  
 가  
 55%(23/42) Abou-  
 Khalil<sup>18</sup> 80.8%(63/78)  
 15  
 Abou-Khalil<sup>18</sup>  
 75% 15  
 가  
 MRI 18 24  
 가  
 10,13,16,24  
 가  
 가  
 2 2 (motor  
 manifestation) 가  
 가  
 , MRI  
 가 Kappa value

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