

1) 1991 1996

ATL 2
(magnetic resonance imaging: MRI)
(lesional epilepsy)

2) MRI, PET, SPECT

5 5
typical, typical+, other
strange sense psychic, epigastric, autonomic,
elation, emotional
typical, vague
other, typical other
typical+
가 typical, motor
other, typical other
typical+

(nasopharyngeal electrode) (sphe-

noidal electrode) (anterior tempo-
ral electrode)
80%⁶⁻⁸ 가
tralateral, ipsilateral, con-
tralateral, 가
ipsilateral+, 가 3
multiple 가
PET SPECT
가 , PET

3) ATL
tailored resection technique
1994 Yale group antero-mesial tempo-
ral resection technique
2 Engel
9 Class (favorable
prognosis group: FPG), Class
(unfavorable prognosis group: UPG)

4) dummy file

5) independent
t-test, ² test

1. 54, 34, 20
27, 14

12 가 video-
20 foramen ovale

2. 54 FPG 39, UPG
15

30 가

(Table 1). verbal, performance, total FPG 21, UPG 2 (p<0.05). UPG 3, FPG (p<0.05).

(Table 2).

1) MRI

MRI

FPG 36, UPG 8

(p<0.05)(Table 3).

2) PET

18

FDG-PET

가

FPG

, UPG

가

UPG

가 2

(Table 3).

3) SPECT

SPECT

36

, FPG

20, UPG 5

(Table 3).

4)

FPG

29, UPG

7

ipsilateral

Table 3. Brain MRI, FDG-PET and interictal SPECT of the patients

	FPG	UPG	P value
MRI	n=39	n=15	
Hippocampal atrophy			0.009
Ipsilateral	36	8	
Contralateral		1	
Normal	3	5	
Cerebellar atrophy	8	2	ns
PET	n=16	n=2	ns
Ipsilateral	11	2	
Contralateral	1		
Bilateral	4		
SPECT (interictal)	n=29	n=7	ns
Ipsilateral	20	5	
Contralateral	4	2	
Normal	5		

Ipsilateral : resection side

Contralateral : contralateral side to resection

FPG : Favorable prognosis group

UPG : unfavorable prognosis group

ns : not significant

Table 1. Characteristics of patients

	FPG (n=39)	UPG (n=15)	P value
Age of onset (yr)	12.37	14.60	ns
Sex ratio (M : F)	24 : 15	8 : 3	ns
Age at surgery (yr)	26.95	26.45	ns
Patient age <30 yr	15	7	ns
Duration of epilepsy (yr)	14.79	11.00	ns
Duration of epilepsy >10 yr	28	9	ns
Family history	3	1	ns
Neurologic deficits	3	0	ns
Febrile convulsion history	21	2	0.025
Encephalitis history	3	3	0.002
Trauma history	5	2	ns
Neuropsychological test*	96.63	94.25	ns

*total score

FPG : Favorable prognosis group

UPG : unfavorable prognosis group

ns : not significant

Table 2. Characteristics of seizures

	FPG (n=39)	UPG (n=15)	P value
Secondary generalized seizure	28	9	ns
Frequency of seizures before surgery*	65.82	77.46	ns
Aura†			ns
Typical	29	9	
Typical+	5	3	
Other	3	2	
Absent	2	1	
Automatism‡			ns
Typical	14	7	
Typical+	21	6	
Other	4	2	

* total number of seizures during 1 year before surgery

† typical : typical aura originated from temporal lobe,

typical+ : typical aura + other type aura from extratemporal lobe,

other : aura from extratemporal lobe

‡ typical : fumbling, vacant staring, lip smacking,

typical+ : typical automatism + other ictal manifestation except generalized seizure,

other : other ictal manifestation except generalized seizure

FPG : Favorable prognosis group

UPG : unfavorable prognosis group

ns : not significant

ipsilateral+ , contralat-
 eral multifocal FPG 2 , UPG 6
 가 (Table 4).

MRI
 가 FPG 27 , 1
 , UPG 4 , 3 ,
 가 (Table 5). 19
 MRI

5)
 , MRI , MRI
 , PET
 , FPG $Y = -2.693$
 $-10.000 * () - 5.000 * (MRI) + 5.000 * (MRI) + 5.000 * (PET)$, UPG
 $Y = -16.526 + 43.333 * () + 26.667 * (MRI) - 6.667 * (MRI) - 15.000 * (PET)$
 () , 18
 100% (predictability)

54 , 18
 , PET
 PET 18
 . PET
 PET
 75.9% (FPG; $Y = -3.193 + 6.000 * ()$, UPG; $Y = -0.693 + 0.003 * ()$).

, MRI
 77.8%
 (FPG; $Y = -2.366 + 0.710 * () + 4.191 ()$, UPG; $Y = -1.557 + 3.338 * () + 1.847 * ()$)(Table 6).

ATL
 가 .¹⁰

2
 90% 2
 2
 가
 2
 ,² 2
 가 .¹¹
 2

FPG 39
 72.22% , UPG 27.78%

Table 4. The location of IEDs

	FPG (n=39)	UPG (n=15)	P value
EEG			0.03
Ipsilateral	20	4	
Ipsilateral+	9	3	
Contralateral	2	5	
Multiple		1	
Normal	8	2	

Ipsilateral : temporal IEDs (interictal epileptiform discharges) on resection side

Ipsilateral+ : temporal and extratemporal IEDs on resection side

Contralateral : IEDs on contralateral side to resection

Multiple : multiple IEDs

FPG : Favorable prognosis group

UPG : unfavorable prognosis group

Table 5. The location of MRI lesion and IEDs

	FPG (n=39)	UPG (n=15)	P value
MRI + EEG			0.007
Concordant	27	4	
Discordant	1	3	
Contraversial	11	8	

Concordant : IEDs and MRI lesion are located in the same side

Discordant : IEDs occurred on contralateral side to the location of MRI lesion

Controversial : non-localizable by MRI+EEG findings

FPG : Favorable prognosis group

UPG : unfavorable prognosis group

Table 6. Discriminant analysis

	Original group	Predicted group		Predictability (%)
		FPG (%)	UPG (%)	
All factors included	FPG	16 (100)	0 (0)	100
	UPG	0 (0)	2 (100)	
All except PET included	FPG	32 (82.1)	7 (17.9)	75.9
	UPG	6 (40)	9 (60.0)	
Significant factors*	FPG	30 (76.9)	9 (23.1)	77.8
	UPG	3 (20.0)	12 (80.0)	

* febrile convulsion history, encephalitis history, MRI & EEG findings proven by univariant analysis

FPG : Favorable prognosis group

UPG : unfavorable prognosis group

Engel 40 2336
 26 ~ 80% 2
 61%가 5
 5 ATL
 27 ~ 70%

9~50%가

^{5,12-15} FPG

가

, UPG

가

,
가

가

가

^{5,16,17}

¹⁸

가

,^{6,29}

MRI

, ATL

가

90%

가

(class or).^{6,30-39}

가

MRI

가

³⁰

가

,³⁰

^{40,41}

가

,
)

(

⁵

가

27%

10%가

⁴² MRI

97%가

가

30

^{10,19} ATL

가

가

가

가

²

가

가

42%

가

33%

가

²

,³⁰

MRI

mirror foci
more ²¹
togenic)

가

,²⁰ Gil-
(epilep-

가

가

1가

2/3

MRI

가

44

36

(82.8%)

가

. MRI

가

31

87.1%가

가

4

75%가

가

3

MRI

가
strange sense,

Deja-vu, jamais-vu,

ATL

1

verbal memory가
fora-
men ovale electrode

가

가

가

가

ATL

, verbal memory

가
(hippocampal
sclerosis)

가

10~20%

가

,²²⁻²⁴

²⁵

⁴³가

,

가

가

^{10,20,26-28}

가

,^{4,6}

,

가

SPECT

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