

## 난치성 간질과 동반된 뇌종양과 피질이형성의 공존

- 수술환자 7명의 임상분석 및 수술전략 -

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= Abstract =

### Coexistence of Neoplasia and Cortical Dysplasia Associated with Intractable Epilepsy - A Clinical Study of Seven Surgical Patients and Surgical Strategies -

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**A** tumor and cortical dysplasia may be the concomitant cause of the causes of intractable epilepsy, but a few studies have examined so far. From among 249 patients who underwent surgery for intractable epilepsy at Dongsan Epilepsy Center, those in whom neoplasia and cortical dysplasia coexisted were selected for this study, and were reviewed the clinical, electrophysiological, neuroimaging and pathological findings. In 17 of 25 lesionrelated epilepsy patients, tumors including dysembryoplastic neuroepithelial tumor(DNT)(n=6), ganglioglioma(n=5), gangliocytoma(n=1), low grade astrocytoma(n=2), oligodendroglioma(n=2), hypothalamic hamartoma(n=1) were verified. Of these 17 cases involving tumors, concomitant cortical dysplasia was observed in 7(DNT ; 6, ganglioglioma ; 1).

All these patients underwent sophisticated presurgical evaluation and intraoperative acute recording(EcoG) for the identification of adjacent or remote epileptogenic areas as well as functional brain mapping by electrical stimulation or SSEP to verify the eloquent areas. In intractable epilepsy, the coexistence of cortical dysplasia and neoplasia is not common, though careful intraoperative evaluation of the tumor and surrounding tissue using electrocorticogram (EcoG) may lead to its pathological identification and excellent surgical results for these rare lesions.

**KEY WORDS :** Dysembryoplastic neuroepithelial tumor(DNT) · Ganglioglioma · Coexistence · Cortical dysplasia · Epilepsy · Electrocorticogram.

## 서 론

간질 (neoplastic) (non - neoplastic) rolandic  
(neuronal migration disorder) Taylor가 , 1971  
(neurono - glial malformative) 가 (cortical dysplasia)  
lesion) 가





Fig. 1. Axial(T2 WI) and coronal (FLAIR) MRIs show cortical cystic mass with isosignal(to cortex) lesion suggesting cortical dysplasia which extend to ependymal layer, verified as dysembryoplastic neuroepithelial tumor(DNT).

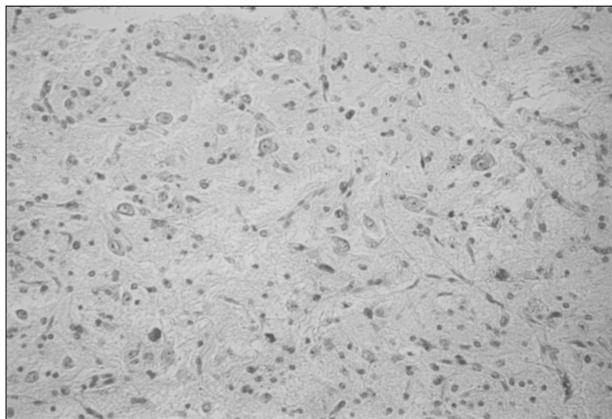


Fig. 2. Characteristic microscopic finding of DNT(dysembryoplastic neuroepithelial tumor) : many oligodendrocyte-like cells(OLC) with prominent nucleoli and glial elements in background(H & E stain, x 200).

(oligodendrocyte-like cell : OLC)가 (Fig. 2).  
가

(Fig. 3).

3. 수술후 추적 관찰 및 경과

12            33            21            5

(Engel's class I), 2

(Engel's class II)            (Table 1).

고 찰

lation)

(ECoG)

(epileptiform discharge)

(neuronogial malformative lesion)

(gliosis),

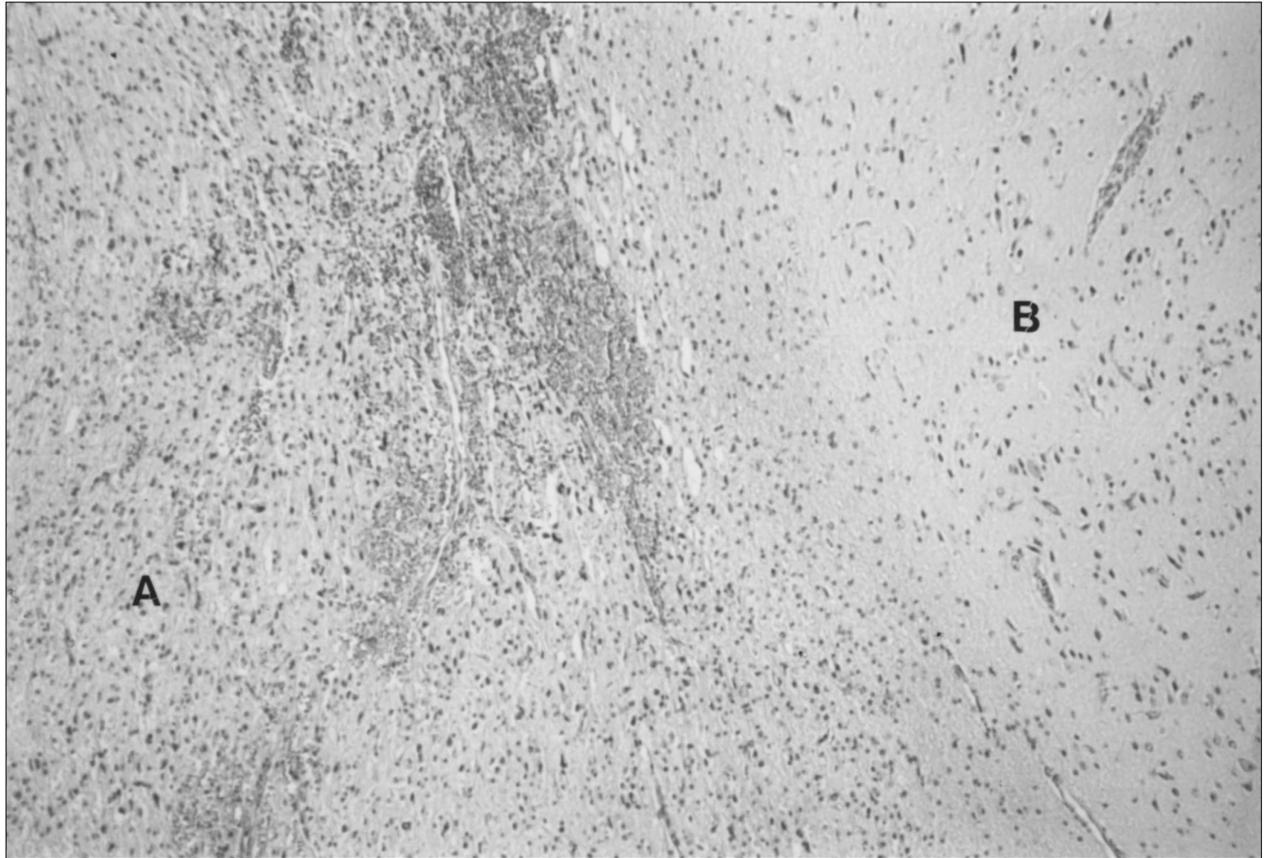
가            (Table

1).

(interictal discharges)

(dual pathology)

가



**Fig. 3.** Dual pathologies in one microscopic field as dysorganized area of cortical dysplasia(A) and neoplastic area(B) of oligodendrocyte-like cells(OLC) (H & E stain,  $\times 50$ ).

1)3)7)9)11)16)19)20)24)27),  
 7 1988 (macrogyria), (microgyria)  
 가 MRI 가 14)17)18), 2mm  
 Daumas - Duport 가 19)  
 (dysembryoplastic neuroepithelial tumor) 가 15).  
 가 6), 1993 Prayson (ganglioglioma) 8 가  
 13 가 3, 2 Courville가 5).  
 24). 가  
 6 1 가  
 1971 Taylor가 가  
 29), (cortical arch - (ganglion cell) Nissle  
 ictecture) 가 21)31)32). Synaptosin  
 (neuronal migrational disorder) 15)18)23). GFAP(glial fibrillary acidic protein)  
 가 32).  
 (synaptogenesis) (neo -  
 29). cortical laminar disorga - plastic form) (dysplastic focus)  
 nization, persistent subpial granular layer balloon cell (neoplastic transformation)  
 change 9가 15). 20)24)25)32), Wolf 32) (hamar -

toma)  
 25) (metastasis)  
 T2  
 T1  
 2)21)  
 7)20)28), Prayson  
 25)  
 1988 Daumaus - Duport

6) (specific  
 glioneural element within mucoid matrix),  
 (multinodular component associated  
 with cortical dysplasia), (oligodendro-  
 cyte - like cell)  
 6)22)30) Cavanagh,  
 Prayson, Daumas - Duport  
 4)6)22)24)

(white matter) 22)24)26)  
 가  
 Raymond  
 PCNA(proliferating  
 nucleolar organizing antigens)  
 가 26)  
 T1  
 , T2  
 (mass effect)  
 가 12)(Ta -  
 6 MRI

가 26)  
 T1  
 , T2  
 (mass effect)  
 가 12)(Ta -  
 6 MRI  
 가 6)12)13)26)

25)

**Table 2.** Differential diagnosis of tumors coexistent with cortical dysplasia<sup>†</sup>

	DNT*	Oligo / Mixed**	Ganglio-glioma
Age of onset	<20	Adult	Children
Multinodular, multicystic	+	-	-
Mixed neuronal/glial	+	-	+
Adjacent cortical dysplasia	+	-	-
Neuronal atypia	-	-	+
Calcification	-	+	+

<sup>†</sup>from ref. 21

\*dysembryoplastic neuroepithelial tumor

\*\*oligodendroglioma/mixed glioma

가 가?  
 Falconer, Morris 9)16)

Boon Kirkpatrick 3)11)

Awad Pilcher 1)16) 가  
 , Palmini, Prayson 19)24)

가 ?  
 ?

가?

가

(lesionectomy) , 가  
 가 (additional corticectomy)

5

2

가

(adjuvant therapy)

결 론

1992 12 1996 6

7  
5

2

가

- : 1997 12 10
- : 1998 1 12
- : 700 - 712 194
- : 053) 250 - 7306, : 053) 250 - 7356

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