

척수종양의 임상적 분석

최원림 · 신원한 · 조성진 · 김범태 · 최순관 · 변박장

= Abstract =

Clinical Analysis of Spinal Cord Tumor

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Objective : This study was undertaken to evaluate operative results and prognosis according to preoperative clinical status and histopathological finding of spinal cord tumor.

Methods : We analyzed of clinical feature, tumor location, histopathologic finding, operative results and prognosis in 55 patients with spinal cord tumor during last 10 years.

Results : 1) The incidence of spinal cord tumors varies with the age of affected patients who are 2 to 75 years of age. Peak incidences were in the 5th & 7th decade of life, and the ratio of male to female was 1.2 : 1.

2) The most common histopathologic type was neurinoma(41.9%).

3) The tumors were located most frequently in the thoracic area(22 cases, 40.0%) and in the intradural extramedullary space(30 cases, 54.5%).

4) The most common initial clinical feature was pain in 20 cases(36.4%). For neurologic status on admission, 30 cases(54.5%) showed motor disturbance.

5) In radiologic studies, there were abnormal finding in 21 cases from plain X - rays among 37 cases. The entire 20 cases in when myelography was done showed subarachnoid blockade, either complete or incomplete. The magnetic resonance imaging, regard as the most accurate diagnostic method, revealed the exact location of the tumor and the relationship of the tumor with the adjacent anatomical structure.

6) The total removal was possible in 36 cases(65.5%), subtotal removal in 17 cases(30.9%) and biopsy in 2 cases (3.6%). Nineteen cases(90.5%) among 21 cases with preoperative radiculopathy group showed recovery or improvement, where as only 11 cases(36.7%) among 30 cases with preoperative motor weakness group showed recovery or improvement, with statistically significant difference($p < 0.01$).

Pathologically, 26 cases(83.9%) among 31 cases of neurinoma and meningioma showed postoperative recovery or improved, but only 1 case(6.3%) among 16 cases of metastatic tumor, astrocytoma and ependymoma recovered. Postoperative complication noted in 5 cases(9.1%), and were noted postoperative hematoma, pneumonia, pulmonary edema and spinal cord infarction.

Conclusion : Preoperative neurologic status and histopathologic finding are considered important factors of Postoperative outcome in patients with spinal cord tumor.

KEY WORDS : Spinal cord tumor · Surgical removal · Post - operative outcome.

서 론

4)15)19)21)

10~20%

가

3-6)15)20)

가

가 15)17)

10

가 6

가 9 3

가 (Table 1).

3. 종양의 발생위치

16 (29.0%),

22 (40.0%), 14 (25.5%) 3

(5.5%) (Table 2),

1989 1 1998 12

가 55

2. 연구 방법

1

(recovery), (improvement), (stationary), (progression) 4

가

가

대상 및 방법

1. 연구 대상

1989 1 1998 12

가 55

2. 연구 방법

1

(recovery), (improvement), (stationary), (progression) 4

가

가

Chi - square test p<0.05

결 과

1. 연령 및 성별 분포

2 75 50 , 40~ 60 32 (58.2%) 가 30

25

1.2 : 1

2. 병리조직적 소견

55

43 (78.2%)

12 (21.8%)

23 (41.9%), 8 (14.6%), 3

(5.5%), 2 (3.6%) 2 (3.6%)

4 , 1

1

가 6

9 3

가 (Table 1).

3. 종양의 발생위치

16 (29.0%),

22 (40.0%), 14 (25.5%) 3

(5.5%) (Table 2),

Table 1. Distribution of sex and pathology

Pathology	Male	Female	Total(%)
Neurinoma	13	10	23(41.9)
Meningioma	4	4	8(14.6)
Lipoma	0	3	3(5.5)
Astrocytoma	1	1	2(3.6)
Ependymoma	0	2	2(3.6)
Hemangioblastoma	0	1	1(1.8)
Lymphoma	1	0	1(1.8)
Neuroenteric cyst	0	1	1(1.8)
Fibrous dysplasia	1	0	1(1.8)
Plasmacytoma	1	0	1(1.8)
Metastatic cancer	9	3	12(21.8)
Total(%)	30(54.5)	25(45.5)	55(100.0)

Table 2. Segmental distribution

Pathology	Cervical	Thoracic	Lumbar	Sacral	Total(%)
Neurinoma	9	7	7	0	23(41.9)
Meningioma	2	5	1	0	8(14.6)
Lipoma	0	0	0	3	3(5.5)
Astrocytoma	1	0	1	0	2(3.6)
Ependymoma	2	0	0	0	2(3.6)
Hemangioblastoma	1	0	0	0	1(1.8)
Lymphoma	0	1	0	0	1(1.8)
Neuroenteric cyst	0	1	0	0	1(1.8)
Fibrous dysplasia	0	1	0	0	1(1.8)
Plasmacytoma	0	0	1	0	1(1.8)
Metastatic cancer	1	7	4	0	12(21.8)
Total(%)	16(29.0)	22(40.0)	14(25.5)	3(5.5)	55(100.0)

30 (54.5%), 19 (34.5%), 5 (9.2%), 1 (1.8%) (Table 3).
 17, 5 dumb-bell 1 8 12 (Table 3).

4. 임상증상 및 신경학적 소견

20 (36.4%), 15 (27.3%), 10 (18.2%), 6 (10.9%), 2 (3.6%) 2 (3.6%) (Table 4).
 30 (54.5%) 가 21 (38.2%), 3 (5.5%) 1 (1.8%) (Table 5).

5. 방사선학적 소견

20 29 가 37 가

Table 3. Compartment distribution*

Pathology	ED	IDEM	IM	ED & ID	Total(%)
Neurinoma	5	17	0	1	23(41.9)
Meningioma	0	8	0	0	8(14.6)
Lipoma	0	3	0	0	3(5.5)
Astrocytoma	0	0	2	0	2(3.6)
Ependymoma	0	0	2	0	2(3.6)
Hemangioblastoma	0	0	1	0	1(1.8)
Lymphoma	1	0	0	0	1(1.8)
Neuroenteric cyst	0	1	0	0	1(1.8)
Fibrous dysplasia	1	0	0	0	1(1.8)
Plasmacytoma	0	1	0	0	1(1.8)
Metastatic cancer	12	0	0	0	12(21.8)
Total(%)	19(34.5)	30(54.5)	5(9.1)	1(1.8)	55(100)

*ED : extradural IDEM : intradural extramedullary
 IM : intramedullary ED & ID : extradural & intradural

Table 4. Initial clinical presentation*

Symptom	ED	IDEM	IM	ED & ID	Total(%)
Pain	7	13	0	0	20(36.4)
Motor weakness	5	6	3	1	15(27.3)
Sensory changes	1	4	1	0	6(10.9)
Motor & Sensory changes	5	4	1	0	10(18.2)
Sphincter disturbance	1	1	0	0	2(3.6)
No symptom	0	2	0	0	2(3.6)
Total(%)	19(34.5)	30(54.5)	5(9.1)	1(1.8)	55(100.0)

*ED : extradural IDEM : intradural extramedullary
 IM : intramedullary ED & ID : extradural & intradural

37 21 (56.8%) 12 (32.5%) 가
 5 (13.5%) 2 (5.4%)
 20 16 2
 2 10

6. 수술 및 수술후 증상의 호전정도

13 3 36 (65.5%), 17 (30.9%) 2 (3.6%) 3 가 8 2 (Table 6).

Table 5. Neurologic status on admission*

Neurologic status	ED	IDEM	IM	ED & ID	Total(%)
Motor weakness	12	13	4	1	30(54.5)
Radiculopathy & sensory changes	6	15	0	0	21(38.2)
Sphincter disturbance	0	1	0	0	1(1.8)
No symptom	1	1	1	0	3(5.5)
Total(%)	19(34.5)	30(54.5)	5(9.1)	1(1.8)	55(100.0)

*ED : extradural IDEM : intradural extramedullary
 IM : intramedullary ED & ID : extradural & intradural

Table 6. Surgical removal of the spine tumor

Pathology	Total	Subtotal	Biopsy	Total
Neurinoma	20	3	0	20
Meningioma	8	0	0	8
Lipoma	1	2	0	3
Astrocytoma	0	2	0	2
Ependymoma	0	2	0	2
Hemangioblastoma	0	1	0	1
Lymphoma	1	0	0	1
Neuroenteric cyst	1	0	0	1
Fibrous dysplasia	1	0	0	1
Plasmacytoma	1	0	0	1
Metastatic cancer	3	7	2	12
Total(%)	36(65.5)	17(30.9)	2(3.6)	55(100)

Table 7. Clinical result according to pre-operative neurologic status*

Neurologic status	Recovery	Improvement	Stationary	Progression	Total(%)
Motor weakness	3	8	17	2	30(54.5)
Radiculopathy & sensory change	16	3	1	1	21(38.2)
Sphincter disturbance	0	1	0	0	1(1.8)
No symptom	0	0	3	0	3(5.5)
Total(%)	19(34.5)	12(21.8)	21(38.2)	3(5.5)	55(100.0)

* Statistically significant(p<0.01)

Table 8. Clinical result according to pathologic findings*

Pathology	Recovery	Improvement	Stationary	Progression	Total
Neurinoma	14	8	1	0	23
Meningioma	2	2	4	0	8
Astrocytoma	0	0	1	1	2
Ependymoma	0	0	2	0	2
Lymphoma	1	0	0	0	1
Others	2	1	4	0	7
Metastatic ca	0	1	9	2	12
Total(%)	19(34.5)	12(21.8)	21(38.2)	3(5.5)	55(100.0)

* Statistically significant(p<0.01)

4 3)7)17) 40 60
 19 (34.5%), 12 (21.8%), 21 (38.2%) 3 (5.5%) 30 3)4)10 - 12)18)19)22)25)26)
 31 (56.3%) 16 7.3 19%가 3 - 5)
 21 19 (90.5%) 58%가 40 60 4)7) 11)18)19)25)
 가 30 11 (36.7%) 1 (1.8%)
 가 (p<0.01)(Table 7). (23.1%) 가 (22.4%),
 4 (15.7%) (6.0%) 16)18)19)
 31 26 (83. 1982 Cheng 3)
 9%) 16 1 (6.3%) 4)10 - 12)25)26)
 가 41.8%, 21.8%
 (p<0.05)(Table 8). 14.5%
7. 합병증 5 10%가 13)18)26)
 5 (9.1%) 4 , 1
 2 , 1 가 6
 1 가
고 찰 가
 50.6% 가 26.5%
 20.5% 10),
 10 20%

가 22 (40.0%), 16 (29.0%), 14 (25.5%) 1921 Sicard Forestier²²⁾
3 (5.5%)

가 45% 가 (22%)
(18%) 3)4)10-12)16-18)25)

Dumb - bell 10 15% 6)17)18)
16)18) 30 (54%)

가 dumb - bell 1 (1.8%) 가
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가 15) 가
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1)7)15)18)22) 53 (96.4%)
23 3
가 8
2
가 3)4)10)18) , 1)4)7)10)18)
, , 31 (56.3%)
38 56% 3)4)10-12)25)26)
21 19 (90.5%)
3)6)7)10)16)17)
37 25 (67.6%) 가 30 11 (36.7%)
가

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