

A case of refractory uremic pleuritis successfully treated with corticosteroid

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Uremic pleuritis is a fibrous pleuritis of unknown pathogenesis in patients with end stage renal disease. Although uremic pleuritis generally responds to regular hemodialysis, cases that are refractory to dialysis or repeated thoracentesis have been reported. Treatment of refractory uremic pleuritis has not been established yet. We report a case of refractory uremic pleuritis which showed marked improvement following corticosteroid therapy. A 53-year-old man who had been on hemodialysis therapy for chronic kidney disease for 5 years was admitted to our hospital presenting with right side pleural effusion and dyspnea. Pleural fluid was straw-colored and exudate in nature. Cytologic examination, microbiologic test for bacteria, fungi, tuberculosis and adenosine deaminase assay had negative results. A pleural biopsy revealed chronic inflammation with fibrosis without any evidence of tuberculosis or malignancy. The pleural effusion did not respond to repeated thoracentesis and continuance of hemodialysis. With a diagnosis of refractory uremic pleuritis, we started prednisone 30 mg per day and tapered it out in 2 months. The pleural effusion responded to the treatment and completely resolved without complication.

Usefulness of Stereotactic Radiosurgery for NSCLC Patients with Multiple Brain Metastases

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Background: Paradigm for the treatment option of cancer patients with multiple brain metastases was changed from whole brain radiotherapy (WBRT) to stereotactic radiosurgery (SRS) regarding to decreased neurocognitive dysfunction of WBRT. We investigated the influence of number of metastases on the overall survival (OS) and progression-free survival (PFS) of patients with multiple brain metastases of non-small cell lung cancer (NSCLC) who underwent SRS for the first therapy. **Methods:** We retrospectively analyzed 89 patients with brain metastases of NSCLC treated using SRS for the first therapy between November 2004 and April 2012 at single tertiary hospital. These patients were divided into 3 groups according to the number of brain tumors; 1 tumor (28 patients), 2-4 tumors (35 patients), 5 or more tumors (26 patients). **Results:** The median follow-up duration was 17.1 months. There were no statistical difference of OS (16.4 ± 14.8 vs. 16.3 ± 13.6 vs. 15.8 ± 9.9 , $p = 0.997$) and PFS (6.6 ± 6.9 vs. 5.3 ± 3.1 vs. 4.2 ± 2.8 , $p = 0.166$) between three groups; the number of brain metastases 1, 2-4, and more than 5. On multivariate Cox regression analysis, the use of EGFR tyrosine kinase inhibitor (TKI) was associated with lower incidence of disease progression (HR 1.007, 95% CI 0.183-0.925, $p = 0.032$). **Conclusions:** This study suggests that SRS may be a good treatment option, even in those patients with 5 or more metastatic brain lesions. The use of EGFR TKI was a variable affecting disease progression.

Table 1. Patients' outcomes according to the number of brain metastasis

	Total (n=89)	1 tumor (n=28)	2-4 tumors (n=35)	≥ 5 tumors (n=26)	p value
OS (months)	16.2	16.4±14.8	16.3±13.6	15.8±9.9	0.997
PFS (months)	5.4	6.6±6.9	5.3±3.1	4.2±2.8	0.166
Disease progression, n (%)	72	25 (89.3)	29 (82.9)	18 (69.2)	0.161
All cause mortality, n (%)	26	12 (42.9)	8 (22.9)	6 (23.1)	0.159

OS = overall survival, PFS = progression free survival

Table 2. Multivariate analysis of covariables affecting disease progression and mortality

	Disease progression HR (95% CI)	p value	Mortality HR (95% CI)	p value
Age	1.007 (0.978-1.037)	0.643	1.010 (0.963-1.059)	0.680
Male	1.182 (0.507-2.753)	0.698	0.707 (0.167-2.983)	0.637
Ever smoker	0.911 (0.408-2.036)	0.821	1.663 (0.471-5.872)	0.429
Adenocarcinoma	0.472 (0.215-1.033)	0.060	0.352 (0.101-1.218)	0.099
Extracerebral metastasis	1.238 (0.698-2.194)	0.466	1.084 (0.429-2.740)	0.865
Tumor volume	1.000 (1.000-1.000)	0.250	1.000 (1.000-1.000)	0.099
Use of EGFR TKI	0.412 (0.183-0.925)	0.032	0.403 (0.114-1.432)	0.160
Number of brain metastasis (≥ 5 vs. 1-4 tumors)	1.882 (0.977-3.625)	0.059	1.768 (0.597-5.238)	0.304

TKI = tyrosine kinase inhibitor