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(MR) 8 ( : 6, : 2) 1

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( , , , ,

: 8 5 T2 (posterior paramedian portion)

, 3 가

가 2 , 가 3 . T1 Gadolinium

, 1 MR

(Decompression sickness) 38.4 , 가 6 , 가 2 . 8 4

(N2)가 4

(1). , , MR 2-57

( 16.2 ) . MR 1.5 Tesla

I ( ) , (GE Signa Advantage, GE Medical

system, Milwaukee, Wisconsin, U.S.A.) , 7

II ( ) MR 1 MR

가 T1 T2 , 6

(1, 2). MR T2 Gadolinium . 2 5 6

(3, MR

4). MR ( ,

8 MR

8

(quadripareisis), (paraple - 가 4 ,

gia), (paraparesis) 가 1 1

, 가 2 , 가 2 , (T6 to T9) , 1 T9 T11

가 1 . 27 48 (Fig. 1). 3 3 가 1 . 4

1 T2

2000 12 8 2001 7 5 , 2

(Fig. 1), T2 (Fig. 2). 2 (Fig. 2). 1 1 1  
가 2 5 6 MR .  
(Fig. 2). 가  
(Fig. 2B), T2 가  
4 )  
.  
C1 C6 6  
. T2 C1 C3



**B.** Axial T2-weighted image clearly shows focal high signal intensity in the left posterior paramedian portion of the thoracic cord (arrowhead).



**B.** On follow-up sagittal T2-weighted image obtained 5 months later, continuous high signal intensity at the same level (arrowheads) is seen.

(Fig. 3). T1 ( 5 ) ,  
 (Fig. 3A).  
 2  
 , 2 MR 가 5 4  
 , 2 MR  
 3 1 . 2 3 10-30% ,  
 MR  
 (Fig. 2). (4).  
 (2, 5).  
 ( 11 ) T7-8  
 1 가 (pulmonary barotrauma)  
 (gas embolism)



**Fig. 3.** A 48-year-old male with cervical spinal cord decompression sickness syndrome.

**A.** Sagittal T1-weighted image shows cord swelling without definite signal abnormality.

**B.** Sagittal T2-weighted image shows continuous high signal lesion in the posterior paramedian portion of the upper cervical cord at C1 through C3 level (black arrows) and non-continuous multifocal high signal intensities in the lower cervical cord (white arrows).

**C.** Axial T2-weighted image at C2-3 level shows left posterior paramedian high signal intensity (white arrow).

**D.** Axial T2-weighted image at C4-5 level shows multifocal high signal intensities in the central gray matter and right posterolateral aspect of the cord (white arrows).

**Table.** Summary of 8 Patients with Spinal Cord Decompression Sickness

Case	Age/Sex	Interval from the accident to MR(days)	Symptom	Location	T2 weighted MRI findings	MRI Follow-up
1	36/M	5	Paraparesis, sensory change below the T10 level	T9 to T11 level*	Continuous high signal	None
2	31/M	20	Lower extremity weakness	T6 to T8 level*	Non-continuous multifocal high signal	Continuous high signal after 5 months
3	42/M	6	Lower extremity weakness	T6 level*	Subtle high signal	Thoracic cord atrophy after 6 months
4	37/F	2	Lower extremity weakness, sensory change below the T11 level	T7 to T9 level†	Non-continuous multifocal high signal	None
5	27/M	9	Gait disturbance	(-)	Negative	None
6	44/M	23	Paraplegia, voiding difficulty	(-)	Negative	None
7	40/F	57	Tingling sensation, motor weakness	(-)	Negative	Negative after 2 months
8‡	48/M	7	Quadriparesis, altered mentality	Upper and lower cervical cord†	Continuous and non-continuous multifocal high signal, cervical cord swelling	None

\* Posterior paramedian white matter of the thoracic cord.

† Posterior paramedian white matter and central gray matter of the spinal cord.

‡ Focal infarction in the left basal ganglia and ischemic lesions in the bilateral periventricular white matters on brain MRI.

(epidural vein) 가 , 1  
(venous stasis)  
(3, 7, 8). (9).  
가 가 , , , .  
(4). (10, 11, 12).  
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(6). T2  
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2 MR

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J Korean Radiol Soc 2001;45:133-137

## MR Findings of Spinal Cord in Decompression Sickness<sup>1</sup>

Ga Yeoul Oh, M.D., In Cheol Cho, M.D., Sang Tae Kim, M.D., Jin Yong Kim, M.D.,  
Ki Hong Kim, M.D., Chun Hwan Han, M.D., Shi Kyung Lee, M.D.

<sup>1</sup>Department of Diagnostic Radiology, Kangnam General Hospital Public Corporation

**Purpose:** To determine the MR imaging findings of spinal cord decompression sickness.

**Materials and Methods:** We retrospectively analysed the spinal MR images of eight patients (M : 6, F : 2) with decompression sickness affecting the cervical spine (n = 1) or thoracic spine (n = 7). The observed extent, location, continuity, signal intensity and contrast enhancement pattern of spinal cord lesions were analysed.

**Results:** The chief MR finding was continuous (n = 2) or non-continuous (n = 3) high signal intensity on T2-weighted images in the posterior paramedian spinal cord. In three cases, additional T2 signal abnormality in the ventral horn of the gray matter was observed. There was no signal intensity abnormality on T1-weighted images or abnormal enhancement on post-Gadolinium T1-weighted images. In one case, cord swelling in addition to T2 signal abnormality was observed.

**Conclusion:** MR imaging is useful for evaluating spinal cord lesions in patients with decompression sickness.

**Index words :** Spinal cord, MR  
Spinal cord, abnormalities

Address reprint requests to : Ga Yeoul Oh, M.D., Department of Diagnostic Radiology, Kangnam General Hospital Public Corporation,  
171-1, Samsung-dong, Kangnam-gu, Seoul 135-090, Korea.  
Tel. 82-2-3430-0384 E-mail: pan@kangnamhosp.or.kr