

Clinical Symptoms of Internal Disc Disruption of the Cervical Spine

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– Abstract –

Study Design : This study reviewed 20 patients who were diagnosed as internal disc disruption (IDD) of the cervical spine. Clinical symptoms were analyzed retrospectively.

Objectives : To assess the various symptoms of IDD of the cervical spine.

Summary of Literature Review : Several studies have demonstrated the symptoms of lumbar spine IDD. No studies have attempted to show the symptoms of cervical spine IDD.

Materials and Methods : A group of patients, who showed chronic neck pain and referred pain to upper limbs after a certain trauma, was materials of this study. All these patients were examined with simple X-ray, flexion-extension views, magnetic resonance image (MRI). When intractable pain was prolonged over 6months in spite of conservative treatment, patient was admitted and performed discogram and computed tomography (CT) for a definite diagnosis. There were 20 patients who were diagnosed as IDD from July 1996 to June 2001, and clinical symptoms were analyzed retrospectively.

Results : The various symptoms of the IDD of the cervical spine were chronic neck pain (100%), shoulder pain (95%), headache (90%), interscapular pain (80%), arm pain and paresthesia (75%), insomnia (75%), hand pain and paresthesia (60%), periocular pain (60%), forearm pain and paresthesia (50%), chin pain (50%), subjective weakness of upper extremity (45%), periauricular pain (40%) and tinnitus (30%).

Conclusion : We are led to believe that patients who have chronic neck pain, shoulder pain, interscapular pain, and other symptoms after a certain trauma of cervical spine are clinically diagnosed as IDD of the cervical spine, although X-ray and MRI are normal. Definite diagnosis of these patients would be made by a discogram, if similar or identical pain is provoked.

Key Words : Cervical spine, Internal disc disruption, Clinical symptoms

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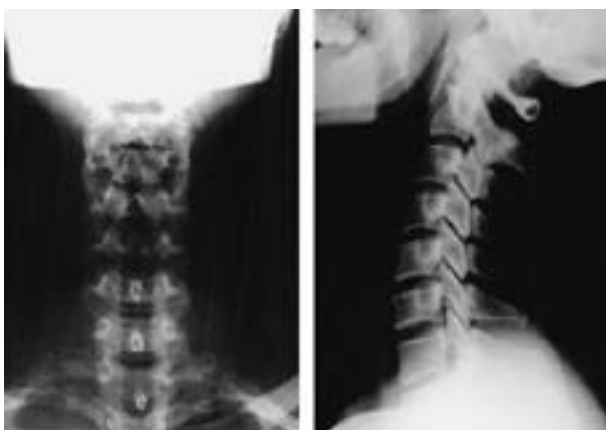


Fig. 1. Anteroposterior and lateral roentgenograms of patient without cervical spine fracture and dislocation.



Fig. 2. Lateral flexion-extension roentgenograms of patient without cervical spine instability.

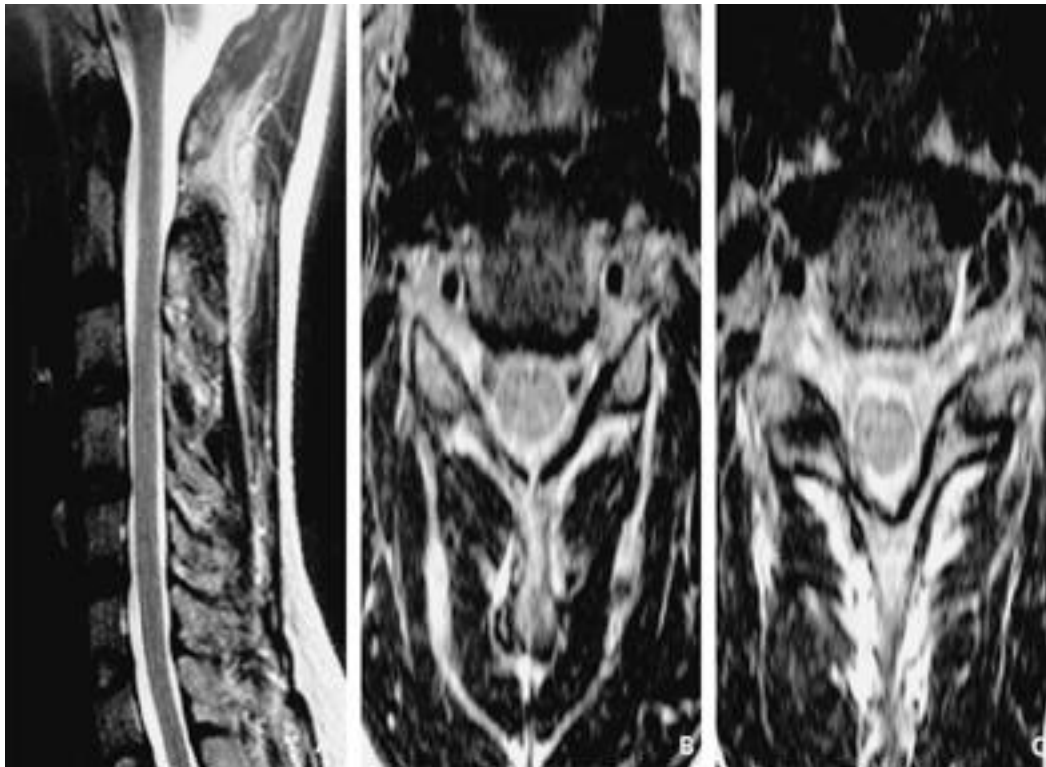


Fig. 3. The MRI of the cervical spine shows normal findings without herniated disc and spinal cord compression. **A.** T2 weighted sagittal MRI. **B.** T2 weighted axial MRI at C4-5. **C.** T2 weighted axial MRI at C5-6.



Fig. 4. Appearance of the discogram at C5-6 is leakage.

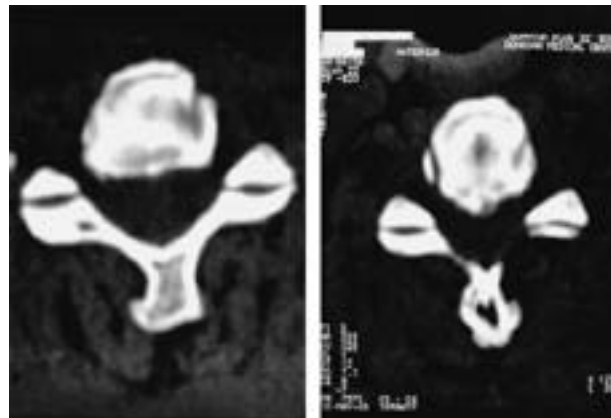


Fig. 5. The CT discograms at C4-5 and C5-6 reveal circumferential tear and dye leakage.

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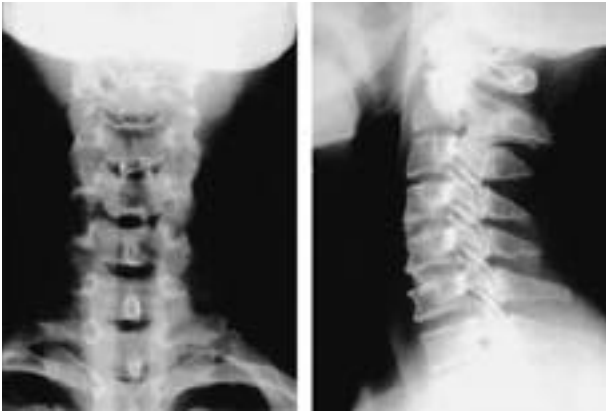


Fig. 6. Anteroposterior and lateral roentgenograms of C4-5 and C5-6 fusion with autogenous bone graft.

Table 1. Clinical symptoms of cervical IDD*.

Clinical symptoms	Number of patients	%
Chronic neck pain	20	100
Shoulder pain	19	95
Headache	18	90
Interscapular area pain	16	80
Arm pain and paresthesia	15	75
Insomnia	15	75
Hand pain and paresthesia	12	60
Periocular pain	12	60
Forearm pain and paresthesia	10	50
Chin pain	10	50
Subjective weakness of upper extremity	9	45
Periauricular pain	8	40
Tinnitus	6	30

* Internal disc disruption

Table 2. Level of Symptomatic Disc(s)

	Number of Painful discs
C 3-4	2
C 4-5	10
C 5-6	18
C 6-7	8

Table 3. Number of Painful Discs

Number of painful Discs	Number of cases
1 disc	5
2 disc	13
3 disc or more	2

[illegible]

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