

## Natural History and Clinical Manifestations of Lumbar Disc Herniation

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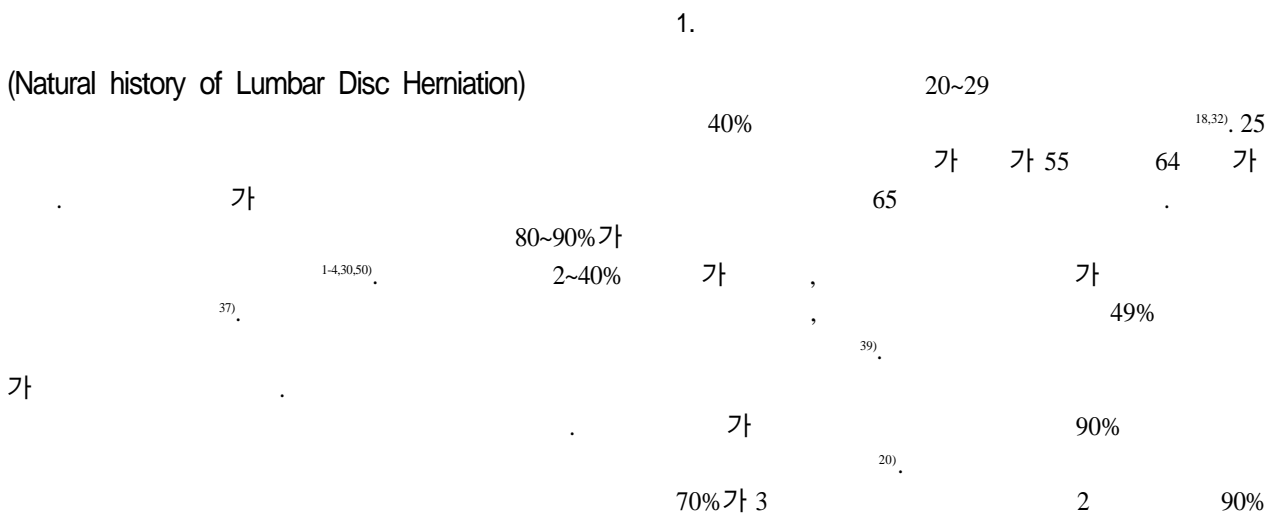
### – Abstract –

The patient of lumbar disc herniation complains low back pain and sciatica. The intervertebral disc was degenerated by aging, the lifetime incidence of low back pain ranges from 80 to 90%, as determined by epidemiologic studies, whereas the incidence of sciatica is only 2~40%.

This article was made with review of the natural history, clinical manifestations and physical examinations of lumbar disc herniation.

In conclusion, a careful history and physical examination remain the key to accurate diagnosis of the cause of low back pain and /or sciatica, and very helpful adjuncts to make a diagnosis of lumbar disc herniations.

**Key Words** : Lumbar disc herniation, Natural history, Clinical manifestations



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가<sup>37)</sup> 50)

10% 2 3

7%, 6 2~3%, 1 1% 2.

6,19,53) 1 40~50%가

6~12 85%~90%

6,22,52) . 2 가 2-40% 50% 가

5,10,37) 6 75%가 1% 가

23,26) 7) 17% 가

38) 가 2.5

6~10 49), 15 50) 가 50)

35 45 Karolinska institute 583 28%가 7

16), 24,49) 가

Roland 41) 1 25%

3 25%

Weber<sup>50)</sup> 15%

가 가

가 가

20%

25) 가 10%, 가 14% 8), 50%

가 5).

33,40) 3

3.

12 가

가 가

50) 가

70~80% 90% 가 25)

17,27,30) 30) 가 , 가 가

2 2 가

2 가

가 60%

1 2 , , ,

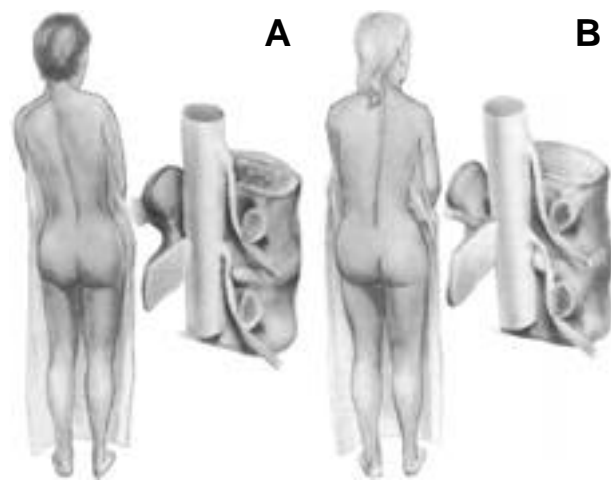




45). 5 가 modified Schober test  
 anergia, anhedonia, , spontaneous 5 10 cm  
 weeping 5 cm 15 cm  
 49) 5 가 6 cm 가 34)

## 2. (Physical examination)

가  
 가  
 43)  
 ,  
 28,42) Hirsh Nachemson  
 232 ,  
 55%  
 28)  
 86%  
 , ,  
 95% 28)  
 , 가  
 가  
 가  
 47)  
 5 1  
 3, 4  
 21,43,45)  
 가  
 가 13)  
 5 1  
 15~30  
 60  
 가

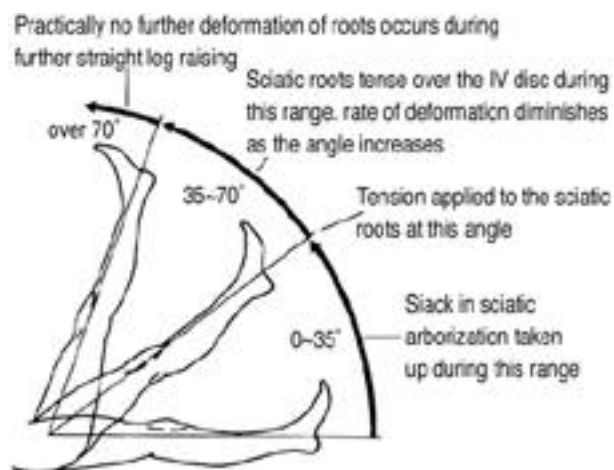


**Fig. 2-A.** Herniated disc lateral to the nerve root. This usually produces a sciatic list away from the side of irritated nerve root.

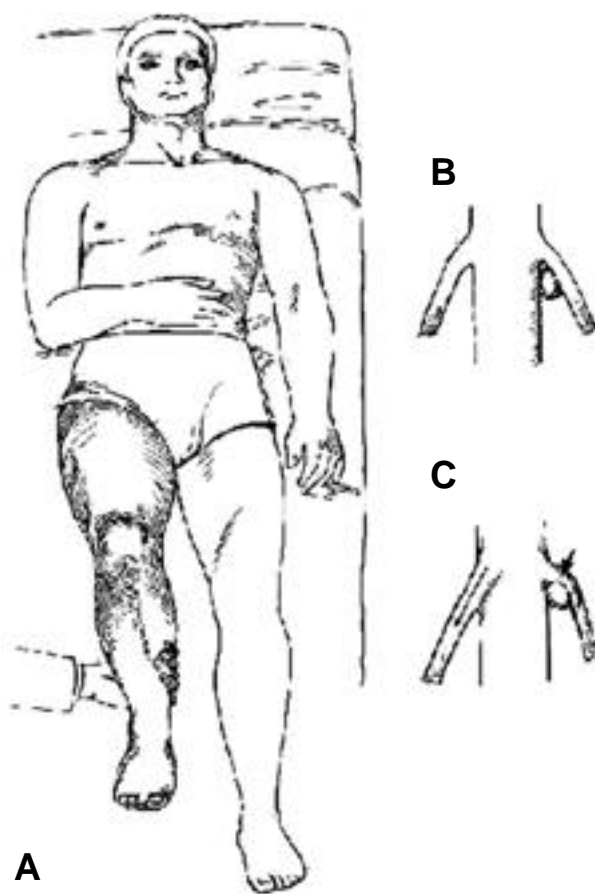
**B.** Herniated disc medial to the nerve root and in an axillary position. This may produce a sciatic list toward the side of irritated nerve root.

(shoulder herniation),  
 (axillary herniation)<sup>43)</sup>(Fig. 2).

가 Fahrni 35. 70 ° , 1 2~6 mm 가  
 , 35 ° ,  
 , 70 ° 47).  
 가 90 ° 90 °  
 ,  
 가 30 가  
 48)(Fig. 3).  
 , ,  
 30 가 가  
 가 45).  
 bow string sign .  
 2, 3, 4  
 가  
 가 well leg lifting test ,  
 . cross over pain test  
 가  
 43,46)(Fig. 4).  
 가 2000  
 90% 52).  
 5 1  
 . L3-4 L4-5 L5-S1  
 5



**Fig. 3.** The dynamics of SLR : Observations on straight leg raising, with special reference to nerve root adhesion.



**Fig. 4.** Movement of nerve roots when the leg on the opposite side is raised.

- A.** When the leg is raised on the unaffected side, the roots on the opposite side slide slightly downward and toward the midline.
- B.** In the presence of a disc lesion, particularly in an axillary locatin, this movement.
- C.** Increases the root tension.

90

가

reverse SLR maneuver

21,43,45)

가

90

가

negative seated SLR

positive supine

SLR

70%

50)

가

3

4

29) 가

5

가

1

1)(Table 2).

2,

3, 4, 5

4

가

2

가

3

가

4, 5

가

5

가

30~40%

2, 3, 4

29)

가

**Table 2.** sensory test

nerve root	sensory distribution
S1	lateral of foot, posterior and lateral of leg posterior of thigh
L5	dorsum of foot and central 2/3, volar aspect of foot lateral of 1st toe, lateral of anterior shin, lateral of thigh
L4	lateral of foot, medial of anterior shin
L3	central 1/3 of anterolateral thigh

**Table 1.** neurologic test according to location of herniated disc

nerve root	L4	L5	S1
uscle weakness	knee extension	ankle extension(big toe extensor)	ankle flexion(big toe flexion)
sensory loss	medial of knee	dorsum of foot lateral of leg	lateral of foot(posterior of leg)
reduced DTR	knee ankle		

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