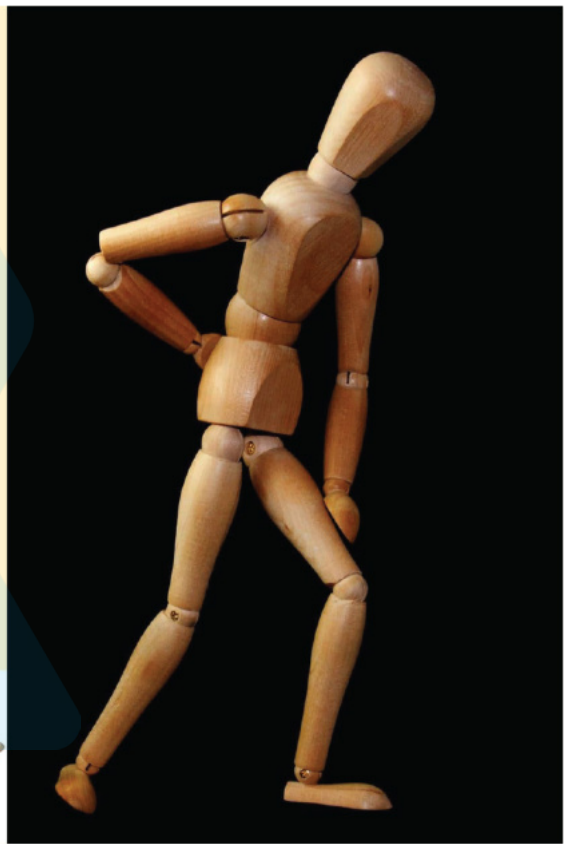
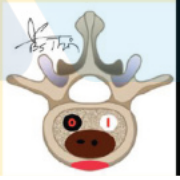
ĐAU THẦN KINH TỌA

KINH NGHIỆM ĐIỀU TRỊ NỘI KHOA

& CHỈ ĐỊNH NGOẠI KHOA



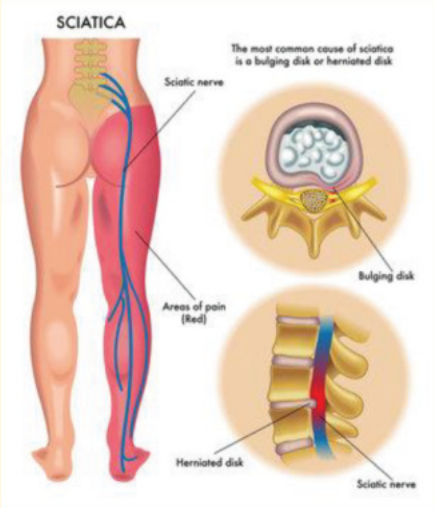
DR NGUYỄN NGỌC THÔI
HO CHI MINH UNIVERSITY MEDICAL CENTER



ĐAU THẦN KINH TỌA LÀ GÌ?

Clinical Symptome:

- *Pain radiating: lower back -> the leg*
- The leg pain is worse > the LBP
- 1st reason: compression/ irritation lumbar spinal nerve root
- OTHER TERM: *lumbar nerve root pain, lumbar radicular pain or radiculopathy*



1. Koes B, van Tulder M, Peul W. Diagnosis and treatment of sciatica. BMJ 2007;334:1313–7. https://doi.org/10.1136/bmj.39223.428495.BE
2. Valat JP, Genevay S, Marty M, Rozenberg S, Koes B. Sciatica. Best Pract Res Clin Rheumatol 2010;24:241–52. https://doi.org/10.1016/j.berh.2009.11.005

DIỄN TIẾN TỰ NHIÊN CỦA ĐAU THẦN KINH TỌA

- *Prevalence of sciatica: 4.8%*
- Symptoms improve *within 12 weeks of onset, usually without any active treatment 32% and 65%*
- At least ***one-third*** of patients continue to suffer with ***pain for ≥ 1 year***
- *Limited number of prognostic factors* independently associated with outcome

8. Heliövaara M, Impivaara O, Sievers K, Melkas T, Knekt P, Korpi J, Aromaa A. Lumbar disc syndrome in Finland. J Epidemiol Community Health 1987;41:251–8. https://doi.org/10.1136/jech.41.3.251
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15. Vroomen PC, de Krom MC, Slofstra PD, Knottnerus JA. Conservative treatment of sciatica: a systematic review. J Spinal Disord 2000;13:463–9. https://doi.org/10.1097/00002517-200012000-00001

The NEW ENGLAND JOURNAL of MEDICINE

Surgery versus Conservative Care for Persistent Sciatica Lasting 4 to 12 Months

Authors: Chris S. Bailey, M.D., Parham Rasoolinejad, M.D., David Taylor, M.D., Keith Sequeira, M.D., Thorsten Miller, M.D., Jon Watson, M.D., Richard Reesdale, P.T., Stewart E. Bailey, M.D., Kevin R. Cure, M.D., Fowad Siddiqi, M.D., Andrew Glennie, M.D., and Jennifer C. Urquhart, Ph.D. Author Info & Affiliations

Published March 19, 2020 | N Engl J Med 2020;382:1093-1102 | DOI: 10.1056/NEJMoa1913658

METHODS

In a single-center trial, we randomly assigned patients with sciatica that had ***lasted for 4 to 12 months*** and lumbar disk herniation at the L4–L5 or L5–S1 level in a 1:1 ratio to ***undergo microdiskectomy*** or ***to receive 6 months of standardized nonoperative care*** followed by surgery if needed

The primary outcome of the leg-pain intensity score at ***6 months was 2.8 in the surgical group and 5.2 in the nonsurgical group*** (adjusted mean difference, 2.4; 95% confidence interval, 1.4 to 3.4; P<0.001). Secondary outcomes including the score on ***the Owestry Disability Index and pain at 12 months were in the same direction as the primary outcome***

Chẩn đoán

- *Manual muscle testing, sensory testing*, *supine straight leg raise*, *Lasegue's sign and crossed Lasegue's sign* are recommended for use in diagnosing lumbar disc herniation with radiculopathy.
- **Grade of Recommendation: A**

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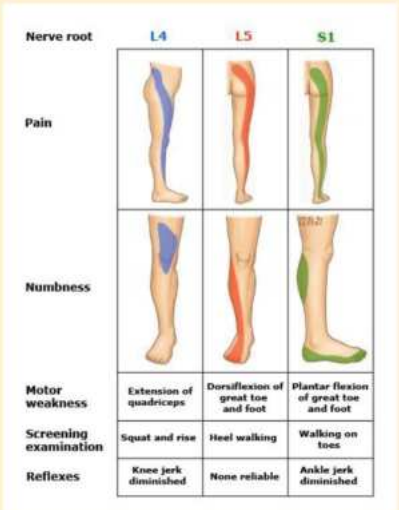


Value of test

research	conclusion
Jensen	*Not very sensitive* -> the exact level
Kortelainen	*Provide specific clues* -> the level
Poiraudeau	Useful -> radiculopathy
Rabin	The supine SLR is *more sensitive* > the seated SLR / disc herniation with radiculopathy (<45 degree)
Vucetic	Crossed Lasegue testing and lumbar range of motion in the sagittal plane may be helpful in *predicting the type of disc herniation*. (rupture disc)

Straight leg raising test
Perform with the knee extended. Flex hip until resistance and/or pain is noted. Test places sciatic nerve, as well as hamstrings on stretch. Patients with herniated disc causing compression of sacral nerve roots often experience back pain radiating to lower extremity.

A *crossed straight leg raising test* is pain in the affected extremity when the contralateral leg is raised and is highly specific for nerve root entrapment.

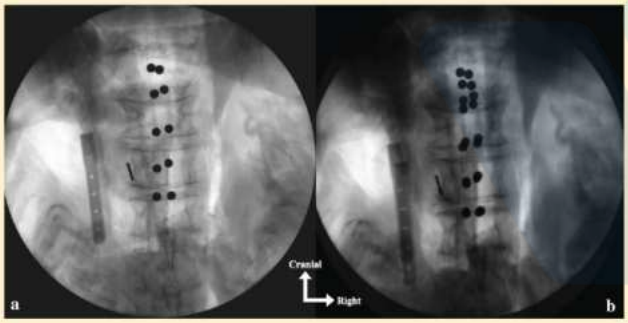
Jensen OH. The level-diagnosis of a lower lumbar disc herniation: the value of sensibility and motor testing. Clin Rheumatol. Dec 1987;6(4):564-569.
Kortelainen P, Puranen J, Koivisto E, Lahde S. Symptoms and signs of sciatica and their relation to the localization of the lumbar disc herniation. Spine (Phila Pa 1976). Jan-Feb 1985;10(1):88-92.
Poiraudeau S, Foltz V, Drape JL, et al. Value of the bell test and the hyperextension test for diagnosis in sciatica associated with disc herniation: comparison with Lasegue's sign and the crossed Lasegue's sign. Rheumatology (Oxford). Apr 2001;40(4):460-466.
Rabin A, Gerszten PC, Karausky P, Bunker CH, Potter DM, Welch WC. The sensitivity of the seated straight-leg raise test compared with the supine straight-leg raise test in patients presenting with magnetic resonance imaging evidence of lumbar nerve root compression. Arch Phys Med Rehabil. Jul 2007;88(7):840-843.
Vucetic N, Svensson O. Physical signs in lumbar disc hernia. Clin Orthop Relat Res. Dec 1996;(333):192-201.

CHẨN ĐOÁN

Movements of the lumbo-sacral nerve roots in the spinal canal induced by straight leg raising test: an anatomical study

Alexandre Bellier[1,2] · A. Latreche[1] · L. Tissot[1] · Y. Robert[1] · P. Chaffanjon[1] · O. Palombi[1,3]

Received: 28 December 2017 / Accepted: 27 May 2018



Conclusions
The lumbo-sacral nerve roots in the spinal canal region *move statistically significantly in response to the clinically applied SLR test*, except for L2 root during the left SLR. This movement is *symmetric and greater when a bilateral SLR is applied*. These anatomical results are correlated with those observed empirically in clinical practice.

HÌNH ẢNH HỌC CHẨN ĐOÁN

In patients with history and physical examination findings consistent with lumbar disc herniation with radiculopathy, **MRI** is recommended as an appropriate, noninvasive test to confirm the presence of lumbar disc herniation.
Grade of Recommendation: A

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Prognostic value of magnetic resonance imaging findings in patients with sciatica

*Abdelilah el Barzouhi, MD, PhD,[1] Annemieke J. H. Verwoerd, MD, PhD,[2] Wilco C. Peul, MD, PhD,[1,3] Arianne P. Verhagen, PhD,[2] Geert J. Lycklama à Nijeholt, MD, PhD,[4] Bas F. Van der Kallen, MD,[4] Bart W. Koes, PhD,[2] and Carmen L. A. M. Vleggeert-Lankamp, MD, PhD,[1] for the Leiden–The Hague Spine Intervention Prognostic Study Group

Conclusions MRI assessment of the presence of nerve root compression and extrusion of a herniated disc at baseline was associated with less leg pain during 1-year follow-up, irrespective of a surgical or conservative treatment. MRI findings seem not to be helpful in determining which patients might fare better with early surgery compared with a strategy of prolonged conservative care.

ĐIỆN CƠ

When the diagnosis of lumbar disc herniation with radiculopathy is suspected,

Cross-sectional imaging be considered the diagnostic test of choice and

Electrodiagnostic studies should only be used to confirm the presence of comorbid conditions.

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BN 1

Nam, 42 tuổi. Lý Thanh T. lao động thủ công

Đau lưng lan chân phải **2 tuần**, chưa điều trị gì

Vas lưng 8, vas lưng 8, ODI 55%

Không Bệnh nền

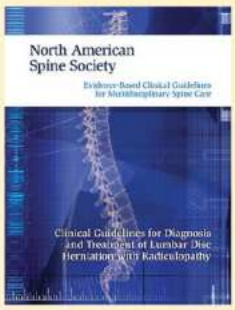
Đau theo rễ L5 phải, sức cơ duỗi ngón cái 4-5/5

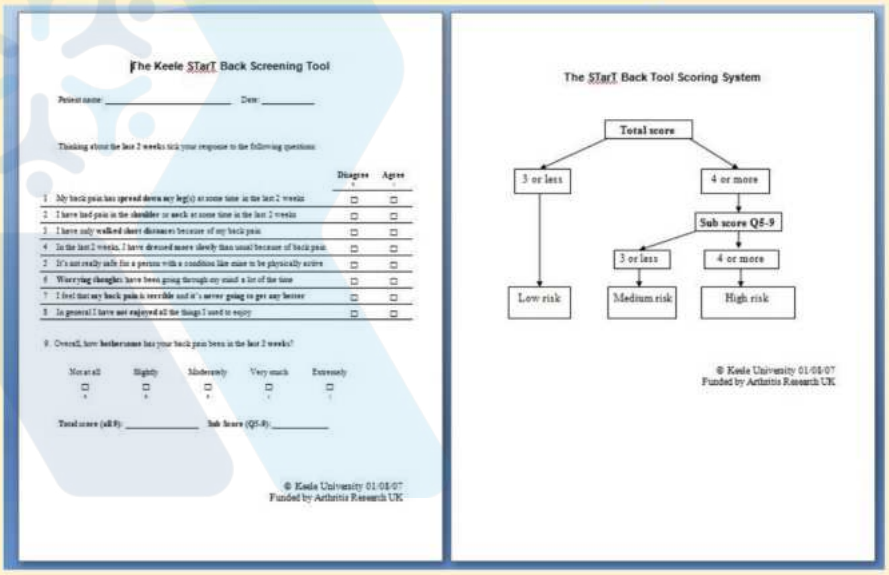
SLR (+)

Dấu tháp (-)

Điều trị??

Vas Back, Vas Leg
ODI score





Điều trị??

ODI SCORE

Interpretation of scores

0% to 20%: minimal disability:	The patient can cope with most living activities. Usually no treatment is indicated apart from advice on lifting sitting and exercise.
21%-40%: moderate disability:	The patient experiences more pain and difficulty with sitting, lifting and standing. Travel and social life are more difficult and they may be disabled from work. Personal care, sexual activity and sleeping are not grossly affected and the patient can usually be managed by conservative means.
41%-60%: severe disability:	Pain remains the main problem in this group but activities of daily living are affected. These patients require a detailed investigation.
61%-80%: crippled:	Back pain impinges on all aspects of the patient's life. Positive intervention is required.
81%-100%:	These patients are either bed-bound or exaggerating their symptoms.

NON-PHARMACOLOGICAL INTERVENTIONS

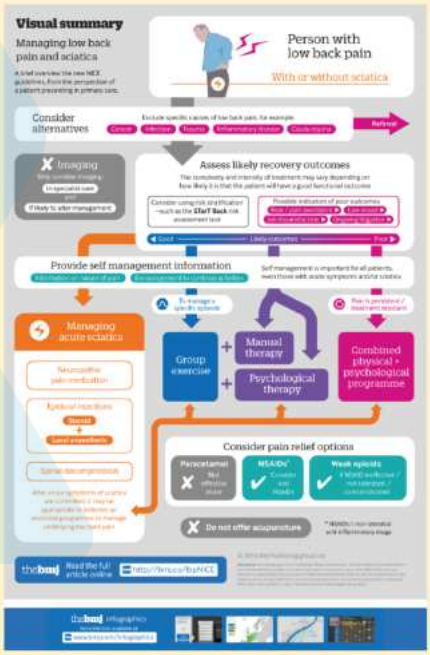
Self-management
- information on the nature of low back pain and sciatica
- encouragement to continue with normal activities.

Exercise

Manual therapies

Psychological therapy

Return-to-work programmes

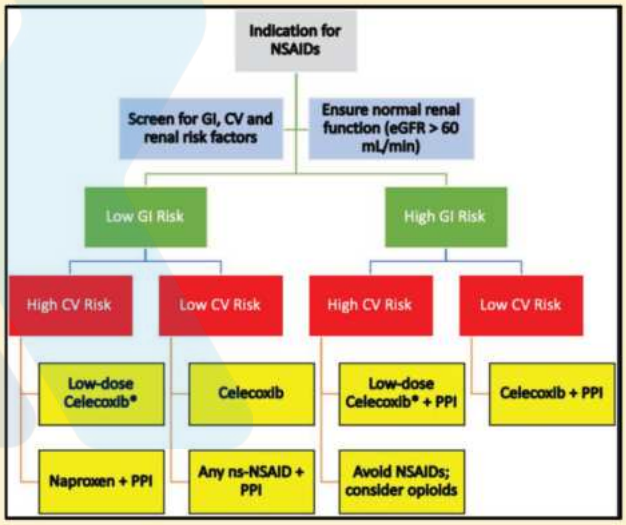


PHARMACOLOGICAL INTERVENTIONS

J Pain Res. 2020 Aug 3;13:1925–1939. doi: 10.2147/JPR.S247781

Practice Advisory on the Appropriate Use of NSAIDs in Primary Care

Kok Yuen Ho [1,*], Mary S Cardosa [2], Sumapa Chaiamnuay [3], Rudy Hidayat [4], Huynh Quang Tri Ho [5], Ozlan Kamil [6,7], Sabarul A Mokhtar [8], Ken Nakata [9], Sandra V Navarra [10], Van Hung Nguyen [11], Rizaldy Pinzon [12], Shuichi Tsuruoka [13], Heng Boon Yim [14,15], Ernest Choy [16]



PHARMACOLOGICAL INTERVENTIONS

There is insufficient evidence to make a recommendation for or against the use of **gabapentin** in the treatment of lumbar disc herniation with radiculopathy.

Grade of Recommendation: I (Insufficient Evidence)

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NORTH AMERICAN SPINE SOCIETY

Kasimcan O, Kaptan H. ***Efficacy of gabapentin for radiculopathy caused by lumbar spinal stenosis and lumbar disk hernia***. Neurol Med Chir (Tokyo). 2010; 50(12):1070-1073.

The authors concluded that gabapentin monotherapy can ***reduce pain and increase walking distance significantly in patients with lumbar disc herniation***. This study provides Level IV therapeutic evidence that gabapentin three times daily titrated to a maximum dose of 2400 mg/day can significantly reduce radicular pain and improve function.

PHARMACOLOGICAL INTERVENTIONS

There is insufficient evidence to make a recommendation for or against the use of **amitriptyline** in the treatment of lumbar disc herniation with radiculopathy.

NASS NORTH AMERICAN SPINE SOCIETY

Pirbudak L, Karakurum G, Oner U, Gulec A, Karadasli H. ***Epidural corticosteroid injection and amitriptyline*** for the treatment of chronic low back pain associated with radiculopathy. Pain Clinic. 2003;15(3):247-253.

The authors concluded that epidural steroid and amitryptiline combination proved beneficial in the management of chronic low back pain associated with radiculopathy. This study provides Level I therapeutic evidence that ***the addition of amitriptyline to blind lumbar interlaminar epidural steroid injections provides significant relief as compared with placebo and interlaminar epidural steroid injections at up to nine months.***

PHARMACOLOGICAL INTERVENTIONS

There is insufficient evidence to make a recommendation for or against the use of a single infusion of **IV glucocorticosteroids** in the treatment of lumbar disc herniation with radiculopathy.

Grade of Recommendation: I (Insufficient Evidence) .

NASS NORTH AMERICAN SPINE SOCIETY

Finckh A, Zufferey P, Schurch MA, Balague F, Waldburger M, So AK. Short-term efficacy of **intravenous pulse glucocorticoids** in acute discogenic sciatica. A randomized controlled trial. Spine (Phila Pa 1976). Feb 15 2006;31(4):377-381.

a single intravenous pulse of glucocorticoid provides **a small and transient improvement in sciatic leg pain**. This study provides Level I therapeutic evidence that a single intravenous infusion of glucocorticoids provides only temporary (three days) relief of pain. A glucocorticoid bolus ***has no effect on functioning or objective signs of radicular irritation related to lumbar disc herniation.***

PHARMACOLOGICAL INTERVENTIONS

Medications for Treating Low Back Pain in Adults. Evidence for the Use of Paracetamol, Opioids, Nonsteroidal Anti-inflammatories, Muscle Relaxants, Antibiotics, and Antidepressants: An Overview for Musculoskeletal Clinicians

David B Anderson, Christina Abdel Shaheed

PMID: 35584029 DOI: 10.2519/jospt.2022.10788

Key results: ***For acute LBP (<12 weeks), muscle relaxants and NSAIDs may be superior to placebo for reducing pain***, but the effects of opioids, antibiotics, and antidepressants are unknown. Paracetamol provides no additional benefit for acute LBP. For chronic LBP (>12 weeks), NSAIDs, antidepressants, and opioids may be superior to placebo for reducing pain, but opioids have an established profile of harms. ***The effects of paracetamol and muscle relaxants for chronic LBP were unclear.***

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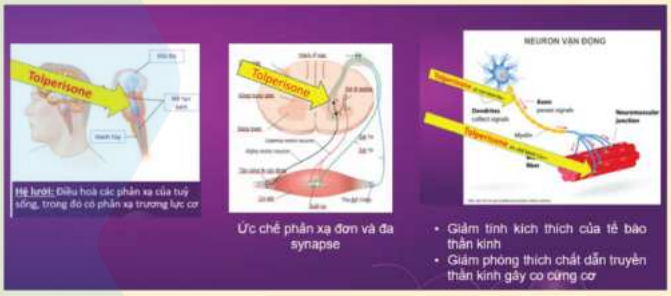
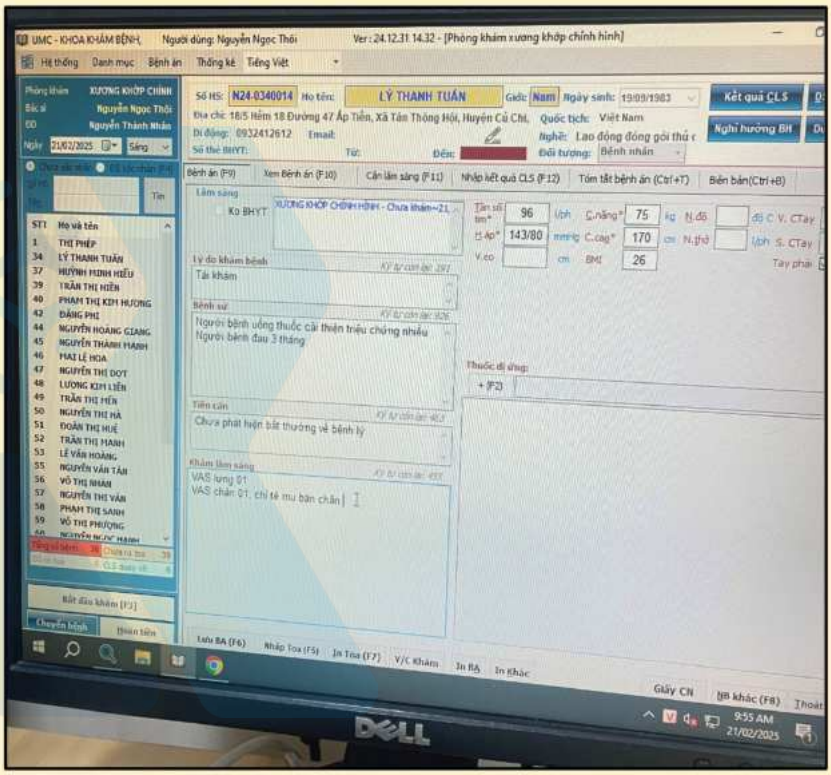


BN1

Celecoxib 200 mg
Mydocalm 150mg
Gabapentin 300mg
Esomeprazol 20mg
Medrol 16mg (5ngày đầu)



BN 2

NGƯỜI BỆNH THA THIẾT PHẪU THUẬT

Nam, 49 tuổi. Nguyễn Hu

Đau lưng lan chân trái **4 tháng**, ***điều trị nội khoa***

+ phục hồi chức năng liên tục

Vas lưng 8, vas lưng 8, ODI 60 %

Không Bệnh nền (?)

Đau theo rễ S1 trái, sức cơ duỗi ngón cái 4-5/5

SLR (+)

Dấu tháp (-)

EPIDURAL STEROID INJECTIONS

Transforaminal epidural steroid injection is recommended to ***provide short-term (2-4 weeks) pain relief*** in a proportion of patients with lumbar disc herniations with radiculopathy. ***Grade of Recommendation: I (Insufficient Evidence)*** .

Ghahreman A, Ferch R, Bogduk N. The Efficacy of ***Transforaminal Injection of Steroids*** for the Treatment of Lumbar Radicular Pain. Pain Med. 2010 Aug; 11(8):1149-1168.

50% obtained relief. Transforaminal steroid injection was found to be more effective than intramuscular steroid injection for the treatment of lumbar radiculopathy secondary to lumbar disc herniation
for short-term (30 days) pain relief and functional improvement.

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EPIDURAL STEROID INJECTIONS

Interlaminar epidural steroid injections may be ***considered in the treatment*** of patients with lumbar disc herniation with radiculopathy.

Grade of Recommendation: C

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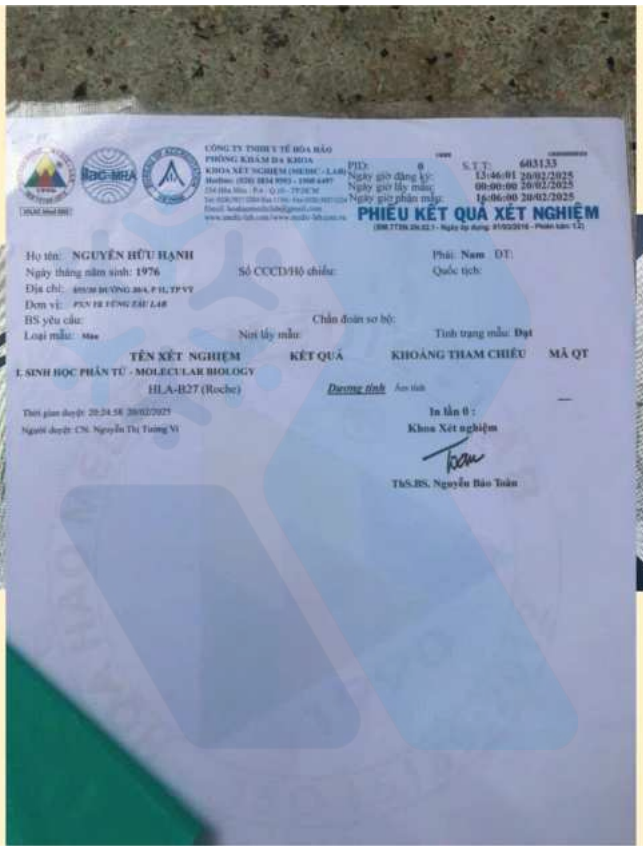
Ackerman WE, Ahmad M. **The efficacy of lumbar epidural steroid injections** in patients with lumbar disc herniations. Anesthes Analges. May 2007;104(5):1217-1222.

At 24 weeks, *the transforaminal epidural steroid group had significantly more patients* ***reporting complete (30%) or partial relief (53%).***
All groups showed significant improvement in functional and depression outcome measures ***two weeks after their last injection.***

BN 2

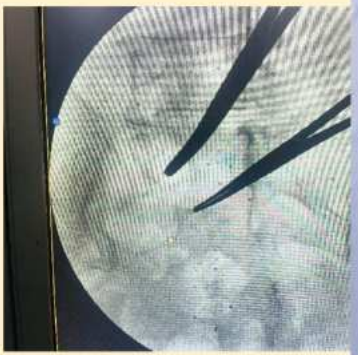

PHIẾU KẾT QUẢ XÉT NGHIỆM

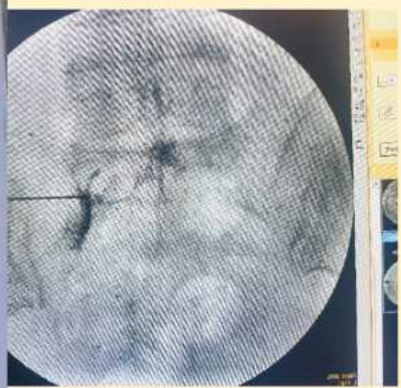
Họ tên: NGUYỄN HỮU HẠNH
Ngày tháng năm sinh: 1976
Phái: Nam
Quốc tịch:

TÊN XÉT NGHIỆM | KẾT QUẢ | KHOẢNG THAM CHIẾU | MÃ QT
I. SINH HỌC PHÂN TỬ - MOLECULAR BIOLOGY
HLA-B27 (Roche) | Dương tính

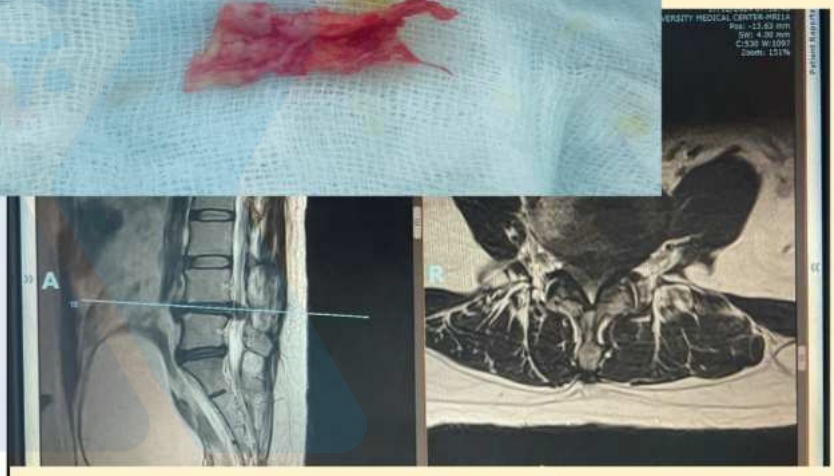
Khoa Xét nghiệm

ThS.BS. Nguyễn Bảo Toàn





BN 3



Nữ, 50 tuổi. Đặng Thị Mỹ L. Làm nông

Đau lưng lan hai chân **1 tháng**, ***điều trị n***

+ phục hồi chức năng liên tục

Vas lưng 8, vas lưng 8, ODI 60 %

Không Bệnh nền

Đau lưng lan hai chân theo rễ L5-S1

sức cơ duỗi ngón cái 1-2 /5

Bí tiểu- 1 ngày

medical/interventional treatment would have good/excellent functional outcomes at *short* (weeks to six months), *medium* (six months - two years) and *long-term* (greater than two years)?

Saal JA, Saal JS. **Nonoperative treatment** of herniated lumbar intervertebral disc with radiculopathy. An outcome study. Spine (Phila Pa 1976). Apr 1989;14(4):431-437.

This study provides Level II prognostic evidence that patients with lumbar radicular pain due to herniated nucleus pulposus may ***obtain good or excellent longterm benefits from medical /interventional treatment.***

Thomas KC, Fisher CG, Boyd M, Bishop P, Wing P, Dvorak MF. Outcome evaluation of **surgical and nonsurgical** management of lumbar disc protrusion causing radiculopathy. Spine. 2007;32(13):1414-1422.

The authors concluded that patients treated **either surgically or nonsurgically for lumbar disc protrusion causing radiculopathy showed no significant difference in change in NASS NSS scores at follow-up**. Clinical outcome of delayed surgery and nonsurgical care may be no different within **one year** of baseline assessment. This study provides Level II prognostic evidence that change in the neurogenic symptom score, from baseline to follow-up, is **not associated with type of treatment received, medical/interventional care or delayed surgery**, in this cohort of patients.

CHỈ ĐỊNH PHẪU THUẬT??? NÊN DÀNH CHO AI??

It is suggested that patients be assessed preoperatively for ***signs of psychological distress, such as somatization and/or depression, prior to surgery*** for lumbar disc herniation with radiculopathy. Patients with signs of psychological distress have ***worse outcomes than patients without such signs***.
Grade of Recommendation: B

Chaichana KL, Mukherjee D, Adogwa O, Cheng JS, McGirt MJ. **Correlation of preoperative depression and somatic perception scales** with postoperative disability and quality of life after lumbar discectomy. J Neurosurg Spine. 2011 Feb;14(2):261-267.

This study provides Level I prognostic evidence that despite similar improvements in leg pain, patients with preoperative depression or somatization have ***poorer outcomes*** as measured by quality of life indices or functional disability scales compared with similar patients without depression or somatization.

CHỈ ĐỊNH PHẪU THUẬT??? NÊN DÀNH CHO AI??

There **is insufficient evidence** to make a recommendation for or against the ***duration of symptoms prior to surgery affecting the prognosis for patients with cauda equina syndrome*** caused by lumbar disc herniation with radiculopathy.
Grade of Recommendation: I (Insufficient Evidence)

McCarthy MJ, Aylott CE, Grevitt MP, Hegarty J. Cauda equina syndrome: factors affecting long-term functional and sphincteric outcome. Spine (Phila Pa 1976). Jan 15 2007;32(2):207-216

This study provides Level IV therapeutic evidence that ***timing of surgery does not influence outcome following decompression for cauda equina syndrome.***

CHỈ ĐỊNH PHẪU THUẬT??? NÊN DÀNH CHO AI??

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It is suggested that patients be assessed using the **preoperative straight leg raising test prior to surgery**, as the presence of a positive straight leg raise test ***correlates with better outcomes from surgery*** for lumbar disc herniation with radiculopathy.
Grade of Recommendation: B

Kohlboeck G, Greimel KV, Piotrowski WP, et al. ***Prognosis of multifactorial outcome*** in lumbar discectomy - A prospective longitudinal study investigating patients with disc prolapse. ClinJ Pain. Nov-Dec 2004;20(6):455-461.

this potential Level I study provides Level II prognostic evidence that a **preoperative straight leg raising sign is associated with better outcomes following decompression** for radiculopathy, while preoperative depression is associated with worse outcomes.

KHI NÀO MỔ

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Surgical intervention **prior to six months** is suggested in patients with symptomatic lumbar disc herniation whose **symptoms are severe enough to warrant surgery**. Earlier surgery (within six months to one year) is associated with ***faster recovery and improved long-term outcomes***.
Grade of Recommendation: B

There is **insufficient evidence** to make a recommendation for or against ***urgent surgery for patients with motor deficits*** due to lumbar disc herniation with radiculopathy.
Grade of Recommendation: I (Insufficient Evidence)

Discectomy is suggested to ***provide more effective symptom relief*** than medical/interventional care for patients with lumbar disc herniation with radiculopathy ***whose symptoms warrant surgical intervention***. In patients with **less severe symptoms**, ***surgery or medical/interventional care appear to be effective for both short- and long-term relief***.
Grade of Recommendation: B

Take home massage

1. Khám lâm sàng là yếu tố quan trọng nhất trong chẩn đoán.

2. Điều trị nội khoa và can thiệp đau có giá trị trong phần lớn trường hợp.

3. Kết quả phẫu thuật phụ thuộc phần lớn vào lựa chọn bệnh trước mổ.