



CLINICA
Dentística
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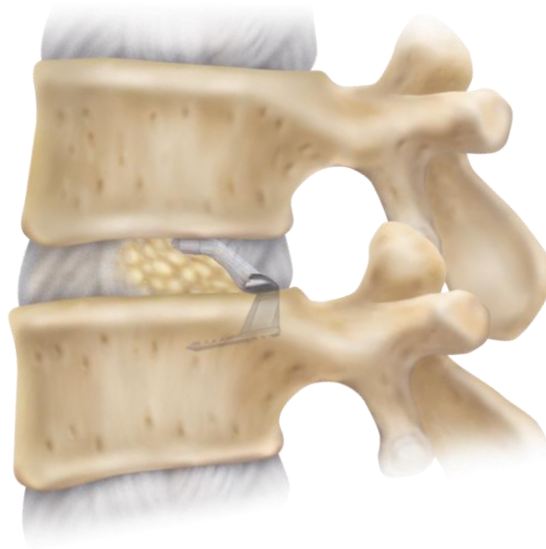
Barricaid

Prótesis para reemplazo anular parcial



Barricaid

- Se implanta al momento de realizar una discectomía lumbar abierta
- Prótesis diseñada para prevenir la nueva formación de hernias y eliminar la necesidad de una discectomía radical y sus posibles secuelas clínicas negativas que incluyen hundimiento discal y dolor de espalda



Dilema del Tratamiento de la Hernia

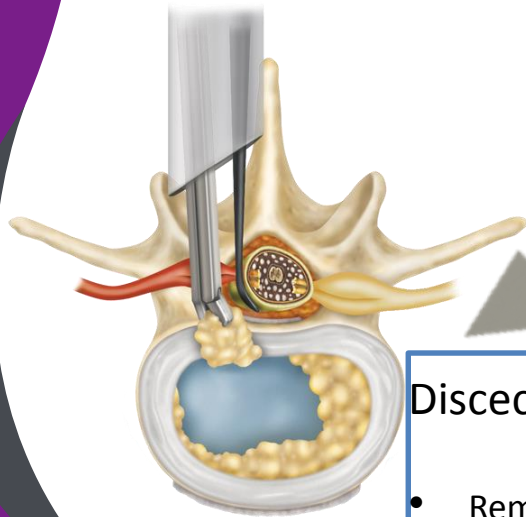
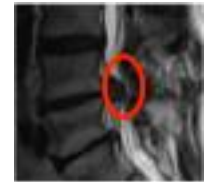
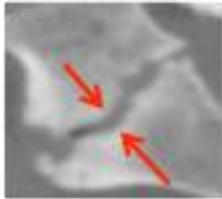
Perfil del paciente

40's

Activo

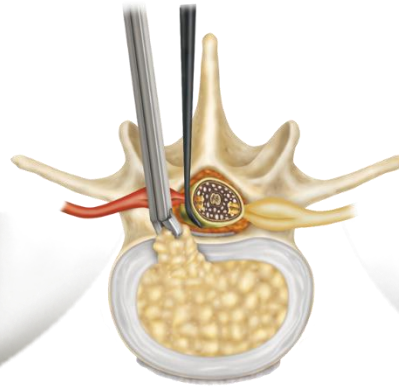
Tall non-degen disc (5mm+)

Large anular defect (5mm+)



Discectomia total

- Remueve la mayoría del material nuclear → colapso discal
- 28% incidencia en dolor en menos de 2 años¹



Discectomía limitada

- Remoción de solo un fragmento
- 5-18% re-herniación en un periodo menor de 2 años¹

E

l dispositivo como complemento de la propia discectomía

- La prótesis está compuesta por una malla de poliéster que mantiene al núcleo dentro del disco al reemplazar la región defectuosa del anillo, anclada a uno de los cuerpos vertebrales adyacentes con un ancla de titanio diseñada para resistir el desplazamiento



Cierre del núcleo en pacientes con alto riesgo

- Discectomía limitada
- Previene la re-herniación ➡ Conservación del disco
- Preserva la altura discal
- Anclaje a Hueso



8 mm



10 mm



12 mm

SELECCION DEL PACIENTE

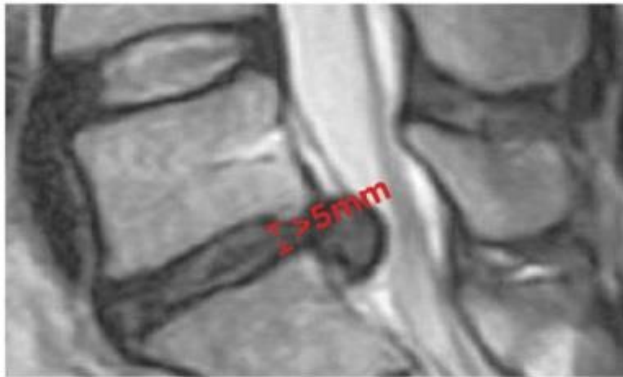
SOLAMENTE aquellos pacientes que se encuentran en alto riesgo de re-herniación o colapso del disco.

- Nivel de actividad
- Pre-quirúrgico altura discal >5mm
- Trans-quirúrgico medida del defecto anular >5mm

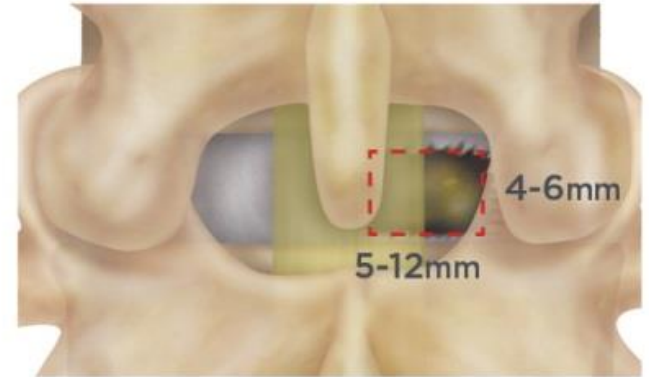


M

onitoreo de pacientes con “alto riesgo”

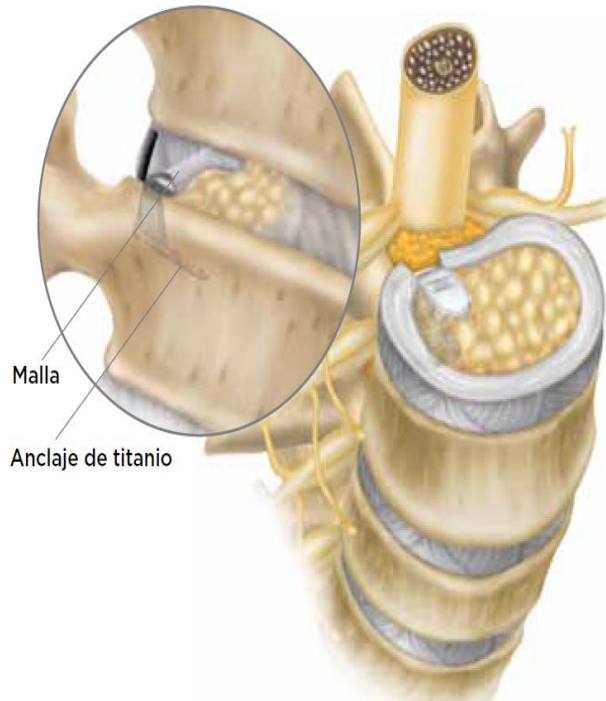


Pre-operatively



Intra-operatively

¿Cómo funciona la prótesis Barricaid?

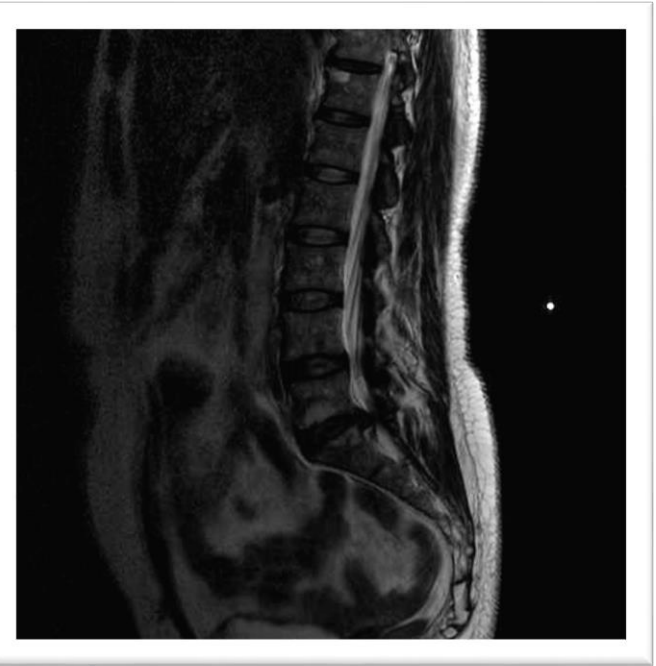


- Después de una discectomía limitada, se implanta en lugar del defecto anular para el cierre anular
- Para el cierre anular se ancla bien al hueso
- La malla prostética forma una barrera que bloquea el defecto y reduce de este modo la posibilidad de repetición de la hernia, al tiempo que previene el doloroso colapso del disco ya que permite dejar de forma segura mas material en su interior
- El procedimiento se realiza como parte del procedimiento de la discectomía

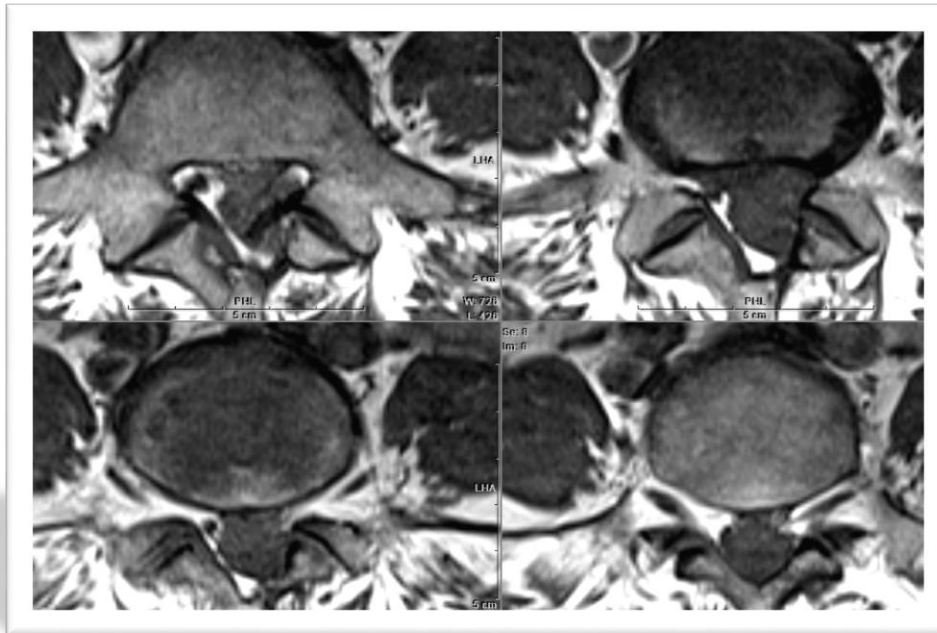
M

ejor seleccion del paciente

- Pre-quirúrgico
 - L3-S1
 - Herniación primaria
 - Herniación medio-lateral
 - Síntomas unilaterales
 - Altura del disco >5mm
- Trans-quirúrgico
 - Altura del defecto 4-6mm
 - Ancho del defecto 5-12 mm



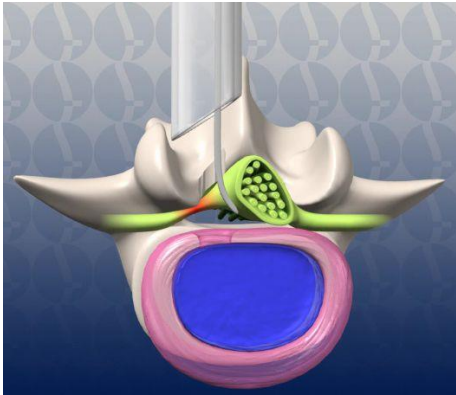
Selección correcta del paciente



- Hernia central
- Lysthesis grado 1
- Disco recurrente
- L1-3

Courtesy of Prof. Dr. S. Rath / Dr. A. Kuršumović, Klinikum Deggendorf, Germany
Primary Herniation: Jan. 2010
Recurrence: Sept. 2012

Advertencias



- Defecto pequeño
- Defecto muy ancho $>12\text{mm}$
- Defecto muy alto $<6\text{mm}$
- Altura posterior del disco $<3\text{mm}$
- Estenosis
- Lysthesis ($>$ Grado I)
- Osteoporosis
- Tumores espinales
- Hernias fuera del foramen
 - Defectos que no pueden ser vistos

S

oporte Clínico Extenso

- Two Prospective Single Arm Barricaid Trials
 - 2008: 75 Patients at 2 Years Follow-up
- Single-center Registry (Deggendorf, Germany)
 - 2009: 148 Patients up to 3 Years Follow-up
- Randomized Prospective Study
 - 2010: > 475 Patients enrolled to date

Resultados clínicos publicados

ORIGINAL ARTICLE

The high-risk discectomy patient: prevention of reherniation in patients with large anular defects using an anular closure device

Gerrit J. Bouma • Martin Barth • Darko Ledic •
Milorad Vilendecic

Eur Spine J
DOI 10.1007/s00586-013-2656-1

European Spine Journal 2013

Very low reherniation rate in high-risk patient

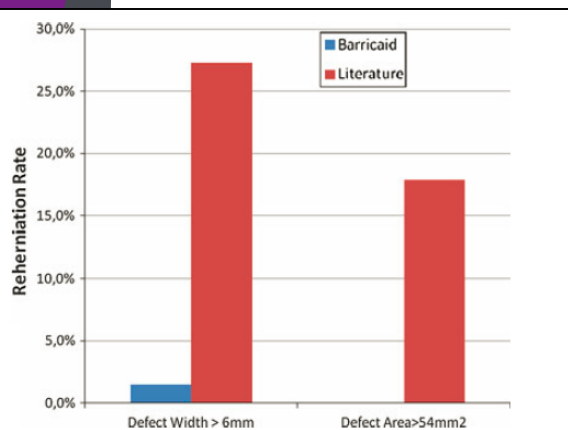


Fig. 6 Symptomatic reherniation rates in patients with poor anular competence versus literature [3, 13]

One (1.4%) reported symptomatic reherniation at mean follow up of 18.7m

“The low reherniation rate in patients at highest risk of reherniation based on anular defect size, despite discectomy being only limited, suggests that anular closure device may reduce reherniation risk.”

Resultados clínicos publicados

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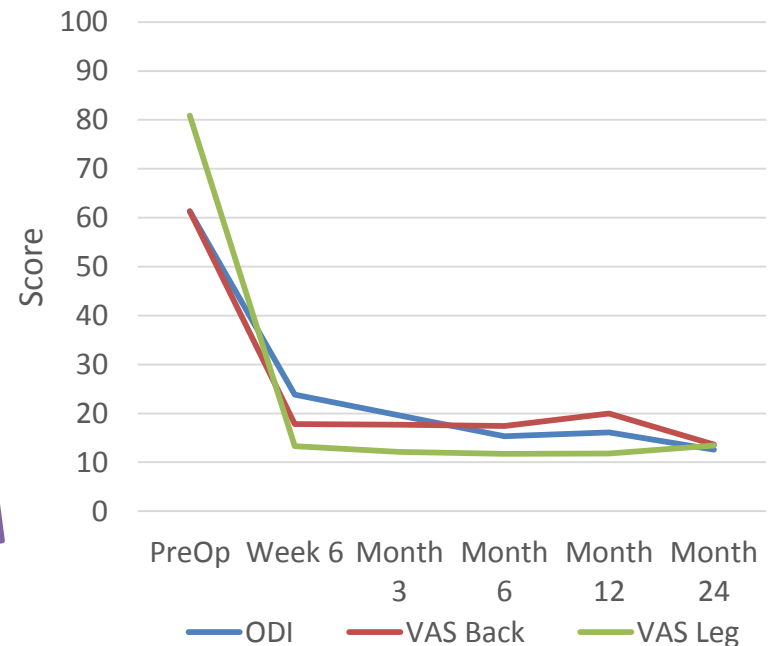
The high-risk discectomy patient: prevention of reherniation in patients with large anular defects using an anular closure device

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European Spine Journal 2013 Clear Pain & Function Improvement

“Clinical outcomes for pain and function at 1 and 2 years post-operative compared favorably with other reports from the literature, suggesting that the device may reduce reherniation risk without affecting the success and safety profile of routine discectomies.”



Resultados clínicos publicados

CLINICAL ARTICLE

Korean J Spine 9(4):340-347, 2012

pISSN 1738-2262/eISSN 2093-6729

www.e-kjs.org

Primary Limited Lumbar Discectomy with an Annulus Closure Device: One-Year Clinical and Radiographic Results from a Prospective, Multi-Center Study

Michiel B. Lequin¹, Martin Barth², Claudius Thomé³, Gerrit J. Bouma¹

Korean Journal of Spine 2012 Disc height preservation

"The device also appears effective in maintaining disc height. The majority of discectomy patients experience greater than a 25% loss of preoperative disc height after surgery, which has been associated with poor clinical outcomes, particularly low back pain. In this study, patients maintained an average of 92.8% of their pre-operative disc height at the 12m follow-up period."



Estudios de seguridad, Eficacia y costo-efectividad

Lead Author	Journal	Studies	Title	Topic
Vukas	Acta Clinica Croatica	A+X	Clinical outcomes in patients after lumbar disc surgery with Annular Reinforcement Device; two-year follow up	Partial 24-month report
Lequin	Korean Spine Journal	B	One-Year Clinical and Radiographic Results from a Prospective, Multi-Center Study of an Annular Closure Device*	Interim (12-month) report
Parker	Central European Neurosurgery	A+X	Cost Savings Associated with Prevention of Recurrent Lumbar Disc Herniation	Cost reduction
Parker	Spinal Disorders and Techniques	A+X	Effect of a novel annular closure device (Barricaid) on same level recurrent disc herniation and disc height loss after primary lumbar discectomy: Two-year results of a multi-center prospective cohort study.	Final 24-month report
Trummer	Clinical Neurology and Neurosurgery	A+B+X	Protecting Facet Joints Post- Lumbar Discectomy: Barricaid Annular Closure Device Reduces Risk of Facet Degeneration	Facet degeneration at 12 months
Bouma	European Spine Journal	A+B	Factors Affecting Reherniation Following Lumbar Discectomy – Can an Annular Closure Device Reduce Reherniation Risk?*	Reherniations
Wilke	Spine	Cadaver	Can prevention of a reherniation be investigated? Establishment of a herniation model and experiments with an annulus closure device.	Reherniation prevention

