



CIRUGÍA y CIRUJANOS

Órgano de difusión científica de la Academia Mexicana de Cirugía
Fundada en 1933

www.amc.org.mx www.elsevier.es/circir



ORIGINAL ARTICLE

Results to 4-year follow-up of the treatment of the cervical stenosis by corpectomy, titanium mesh cage and anterior plate fixation[☆]



Alejandro Antonio Reyes Sánchez*, Luis Alberto Gameros Castañeda, Claudia Obil Chavarría, Armando Alpizar Aguirre, Barón Zárate Kalfópulos, Luis Miguel Rosales-Olivares

División de Cirugía de Columna Vertebral, Instituto Nacional de Rehabilitación, Secretaría de Salud, Ciudad de México, Mexico

Received 12 October 2015; accepted 26 October 2016

Available online 1 December 2017

KEYWORDS

Cervical spine;
Corpectomy;
Subsidence;
Titanium mesh cage

Abstract

Background: Cervical spondylotic myelopathy is caused by cervical stenosis. Several techniques have been described for the treatment of multilevel disease, such as the anterior corpectomy with titanium mesh cage and anterior cervical plate placement, which has the advantage of performing a wider decompression and using the same bone as graft. However, it has caused controversy since the collapse of the mesh cage continues being a major limitation of this procedure.

Material and method: A prospective 4-year follow-up study was conducted in 7 patients diagnosed with cervical stenosis, who were treated surgically by one level corpectomy with titanium mesh cage and anterior cervical plate placement, evaluating them by radiographs and clinical scales.

Results: 7 patients, 5 women and 2 males were studied. The most common level was C5 corpectomy ($n=4$). The Neck Disability Index (NDI) preoperative average was 30.01 ± 24.32 and 4-year postoperative 16.90 ± 32.05 , with $p=0.801$. The preoperative and 4-year postoperative Nürick was 3.28 ± 0.48 and 3.14 ± 1.21 respectively, with $p=0.766$. Preoperative lordosis was 14.42 ± 8.03 and 4-year postoperative 17 ± 11.67 degrees, with $p=0.660$. The immediate postoperative and 4-year postoperative subsidence was 2.69 ± 2.8 and 6.11 ± 1.61 mm respectively, with $p=0.0001$.

PII of original article: S0009-7411(16)30092-5

[☆] Please cite this article as: Reyes Sánchez AA, Gameros Castañeda LA, Obil Chavarría C, Alpizar Aguirre A, Zárate Kalfópulos B, Rosales-Olivares LM. Resultados a 4 años de seguimiento del tratamiento del conducto cervical estrecho mediante corpectomía, malla de titanio y fijación anterior con placa. *Cir Cir.* 2017;85:381–386.

* Corresponding author at: Av. Paseo de la Reforma 155 1.^{er} piso, Col. Lomas de Chapultepec, Del. Miguel Hidalgo, C.P., 11000 Mexico City, Mexico. Tel.: +55 2623 0130ext.0285/86.

E-mail addresses: alereyes@inr.gob.mx, areyes@vertebrae.com.mx (A.A. Reyes Sánchez).

PALABRAS CLAVE

Columna cervical;
Corpectomía;
Hundimiento;
Malla de titanio

Conclusions: Despite the small sample, the subsidence of the mesh cage is common in this procedure. No statistically significant changes were observed in the lordosis or Nürick scale and NDI.

© 2016 Academia Mexicana de Cirugía A.C. Published by Masson Doyma México S.A. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Resultados a 4 años de seguimiento del tratamiento del conducto cervical estrecho mediante corpectomía, malla de titanio y fijación anterior con placa

Resumen

Antecedentes: La mielopatía cervical espondilótica es ocasionada por un conducto cervical estrecho. Se han descrito varias técnicas para el tratamiento multinivel, como la corpectomía anterior más colocación de malla y placa anterior, que tiene la ventaja de realizar una descompresión más amplia y utilizar el mismo tejido óseo como injerto; sin embargo, es causa de controversia, ya que el hundimiento de la malla sigue siendo la mayor limitación que tiene este procedimiento.

Material y método: Se realizó un estudio prospectivo con seguimiento a 4 años, en 7 pacientes con diagnóstico de conducto cervical estrecho que fueron tratados quirúrgicamente mediante corpectomía de un nivel, colocación de malla de titanio y placa cervical anterior, evaluándolos mediante radiografías y escalas clínicas.

Resultados: Se estudió a 5 pacientes femeninos y 2 masculinos. El nivel más común de corpectomía fue C5 (n=4). El índice de discapacidad cervical (IDC) prequirúrgico media de 30.01 ± 124.32 y posquirúrgico a 4 años 32.05 ± 16.90 , $p=0.801$. El Nürick prequirúrgico y posquirúrgico a 4 años fue 3.28 ± 0.48 y 3.14 ± 1.21 , respectivamente, $p=0.766$. La lordosis prequirúrgica fue de 14.42 ± 8.03 y la posquirúrgica a 4 años 17 ± 11.67 grados, $p=0.660$. El hundimiento posquirúrgico inmediato y posquirúrgico a 4 años fue de 2.69 ± 2.8 y 6.11 ± 1.61 mm, respectivamente, $p=0.0001$.

Conclusiones: A pesar de lo pequeño de la muestra, el hundimiento de la malla es común en este procedimiento. No se observaron cambios estadísticamente significativos en la lordosis ni en la escala de Nürick ni en el IDC.

© 2016 Academia Mexicana de Cirugía A.C. Publicado por Masson Doyma México S.A. Este es un artículo Open Access bajo la licencia CC BY-NC-ND (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Background

The term cervical spondylosis encompasses degenerative changes to the spine.

Cervical spondylosis is a sequence of changes to the intervertebral discs, the vertebrae and the joints, associated with degenerative changes caused by ageing or secondary to trauma. The main symptom is neck pain that is frequently associated with pain in the shoulder region.¹⁻³

Cervical spondylotic myelopathy is a degenerative process caused by stenosis of the cervical canal and is the primary cause of functional disability in adults.^{4,5} For this reason, efforts have been made internationally to find appropriate treatment for this disorder. There are currently many surgical treatments for the condition that have been standardised over time.⁶⁻⁹

Although anterior cervical discectomy and fusion has been the gold standard in the treatment of cervical canal stenosis, techniques have been described to treat multilevel disease under the premise that the use of an implant reduces

morbidity since it does not require taking a graft.¹⁰⁻¹² Using a cervical mesh as an anterior support when performing a corpectomy, has the advantage over 2-level discectomy of creating a wider decompression window, and the same bone tissue from the corpectomy is used as the graft.¹³⁻¹⁵

The treatment is controversial, since subsidence of the cage is still the main limitation of this procedure.¹⁶⁻²⁰

Anterior discectomy and arthrodesis with tricortical graft is currently the most commonly used technique to treat cervical radiculopathy and myelopathy. For placement of the tricortical graft, in biomechanical studies there is no statistical relevance of the height of the graft with application of distractive force.¹³ The use of cervical mesh cages started in 1986.²¹ Titanium mesh cages are rigid cylindrical implants which fill with spongy bone to provide anterior support and facilitate intervertebral arthrodesis.^{21,22} Their advantages are reduced morbidity at the donation site and their fusion rate; their disadvantages are their cost, determining radiographic union, revision surgery and migration.^{18,20,23-25} The indications for corpectomy are: multilevel disease,

Download English Version:

<https://daneshyari.com/en/article/8831237>

Download Persian Version:

<https://daneshyari.com/article/8831237>

[Daneshyari.com](https://daneshyari.com)