

Dejeneratif Servikal Disk Hastalığında Cerrahi Alternatifler

(Anterior Füzyon)

Dr.Hakan BOZKUŞ



Servikal Anterior Yaklaşım

The Treatment of Certain Cervical-Spine Disorders by Anterior Removal of the Intervertebral Disc and Interbody Fusion *

BY GEORGE W. SMITH, M.D., AND ROBERT A. ROBINSON, M.D., BALTIMORE, MARYLAND

JBJS 1958

THE ANTERIOR APPROACH FOR REMOVAL OF RUPTURED CERVICAL DISKS*

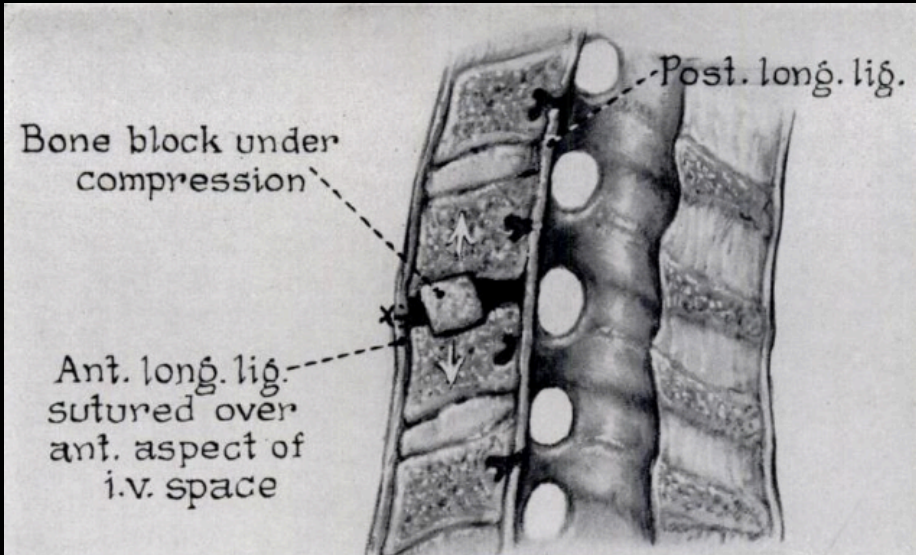
RALPH B. CLOWARD, M.D.†

Honolulu, Hawaii

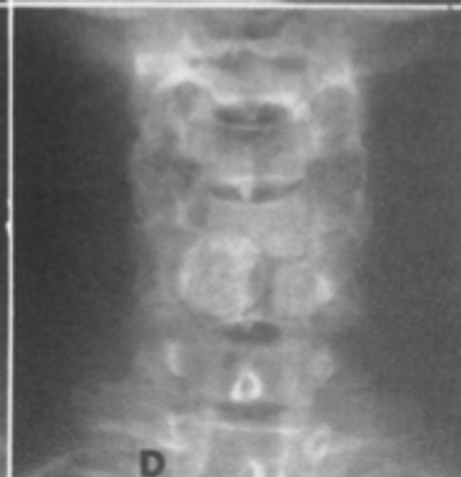
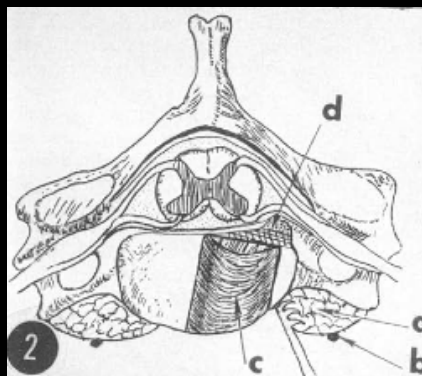
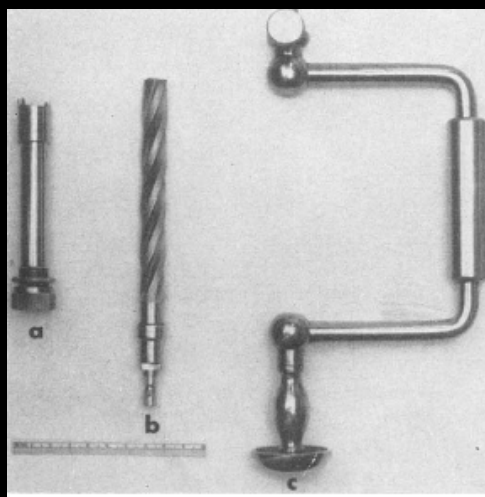
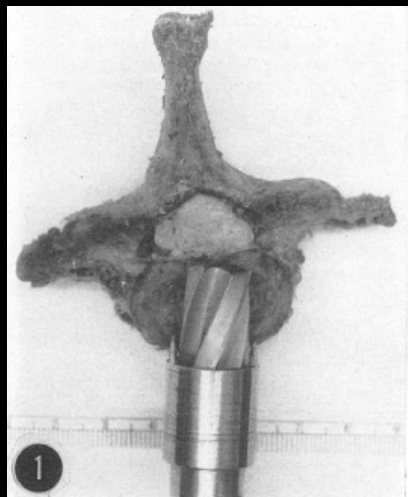
(Received for publication September 3, 1957†)

J Neurosurg 1958

Smith & Robinson



Cloward



Füzyonsuz Servikal Diskektomi

FROM THE ORTHOPAEDIC DEPARTMENT, UNIVERSITY OF UPPSALA, SWEDEN
(HEAD: PROFESSOR CARL HIRSCH)

CERVICAL DISK RUPTURE

Diagnosis and Therapy

By

CARL HIRSCH

Acta Orthop Scand 1960

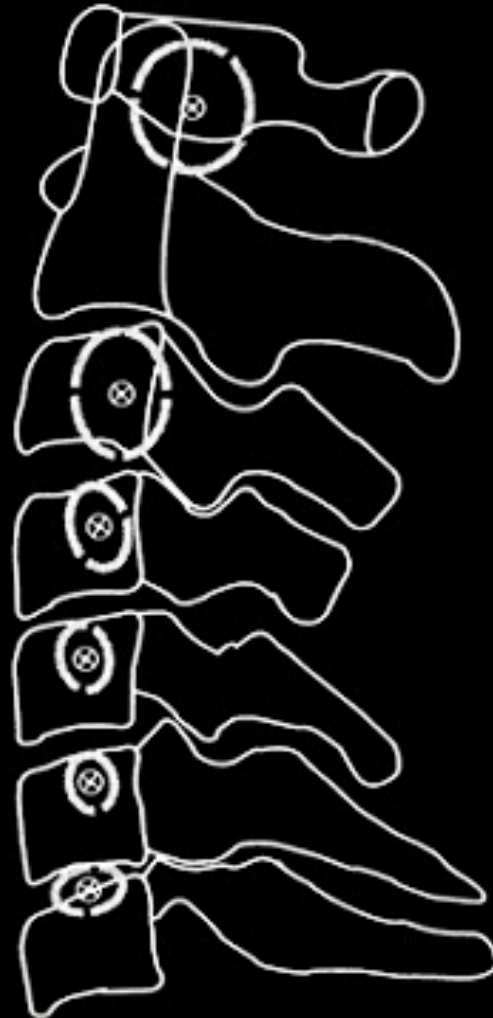
TABLE 3
Operated cases.

Diary no.	Age	Sex	Duration of symptoms	Subjective symptoms in arms		Neurologic examination			Electromyographic examination	Roentgenographic examination Disk degeneration	Myelographic examination Nerve root compression	Operation Resection of disk	Length of follow-up In months after op
				Right	Left	Sensib.	Reflexes	Pareses					
18.05.08	40	♂	3 months	C6		+	—	—		C5-C6-C7	C7 right	C6-C7	12
18.06.29	41	♀	2 years	C6		—	+	+	—	C4-C5-C6	C5 right C6 right	C4-C5 C5-C6	9
08.03.13	51	♂	2 years	C6		+	—	—	C4-C6	C3-C4-C5-C6-C7	C5 right C6 right+left	C4-C5 C5-C6	8
03.07.23	56	♂	2½ years	+		+	—	+		C6-C7	C5 right+left C6 right+left C7 right+left	C4-C5 C5-C6 C6-C7	8
07.11.07	52	♂	3 years	C8		—	+	+		C3-C4-C5-C6-C7	C5 left C6 left	C4-C5 C5-C6	3
06.11.18	53	♂	6 years	C8		—	—	—		C5-C6-C7	C6 right+left C7 right+left	C5-C6 C6-C7	6
13.01.04	46	♂	13 years	C6		—	—	—	C8	C5-C6	C6 left	C5-C6	3

CARL HIRSCH

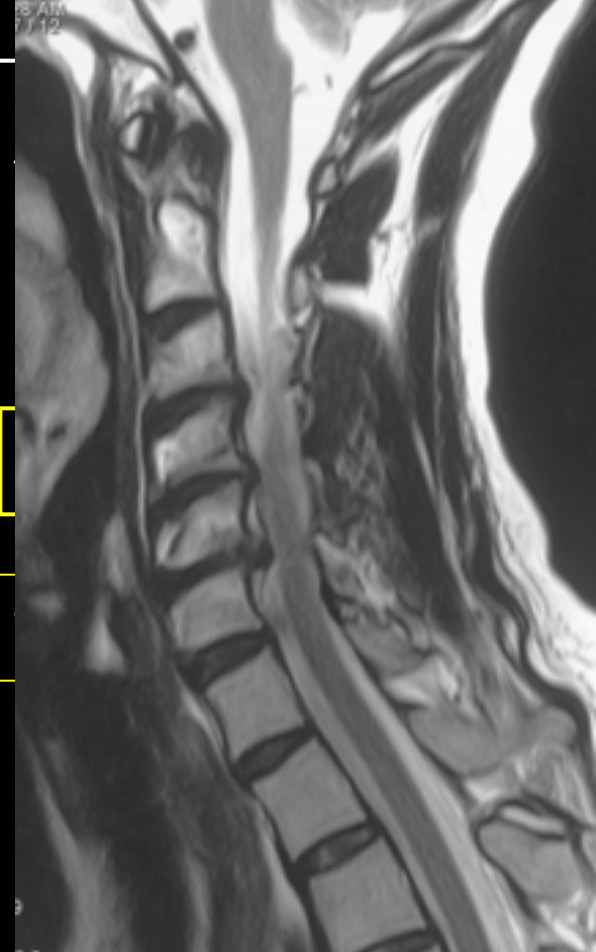
Servikal RAE

Sagittal plan

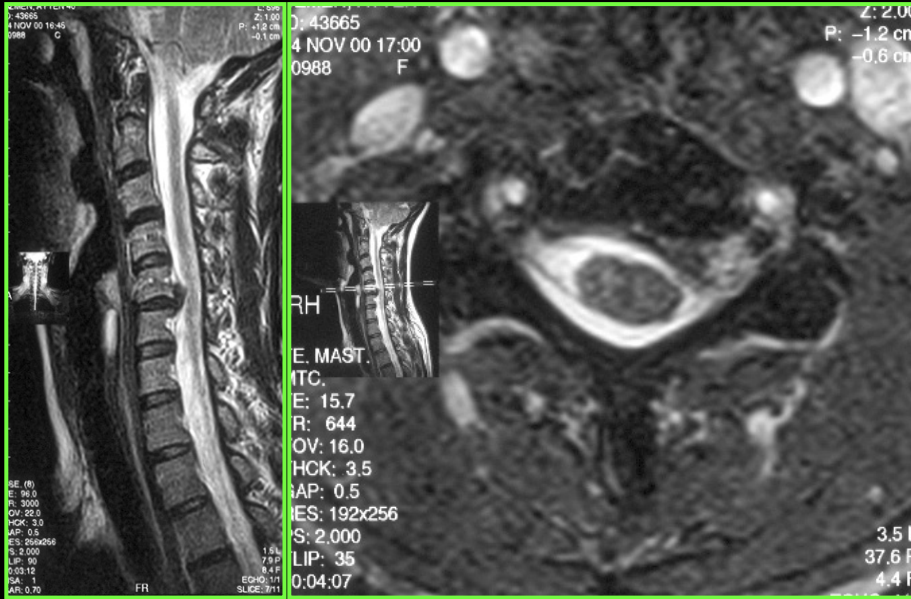


Servikal Hareket Aralığı (°)

	C0-C1	C1-C2	C2-C3	C3-C4	C4-C5	C5-C6	C6-C7
Fleksiyon	7.2±2.5	12.3±2.0	3.5±1.3				6.7±2.1
Ekstansiyon	20.2±4.6	12.1±6.5	2.7±1.0				8.4±1.9
Aksiyal Rotasyon	9.9±3.0	56.7±4.8	3.3±0.8				8.9±0.8
Lateral Bending	9.1±1.5	6.5±2.3	9.6±1.8				6.4±1.5

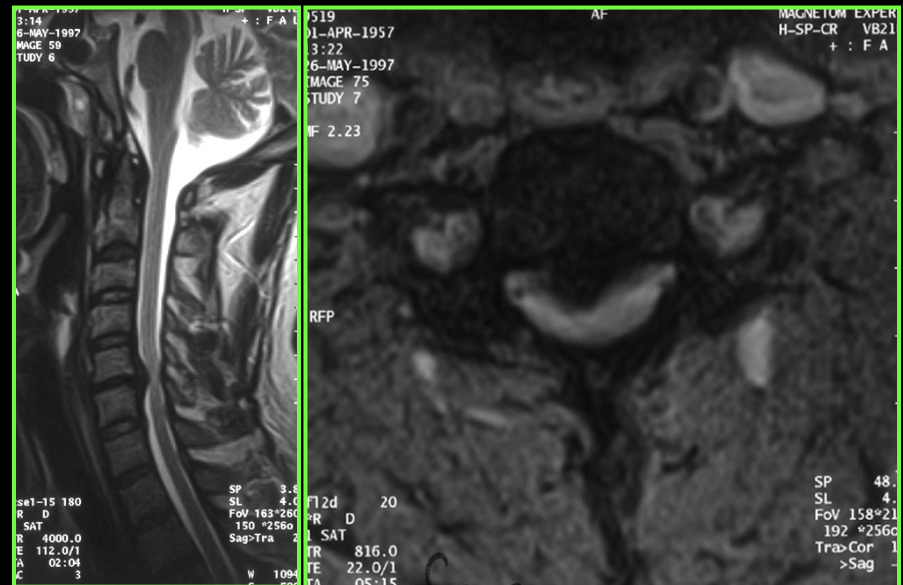


Servikal Disk Hernisine Yaklaşım



Foraminal Disk

Orta Hat Basısı



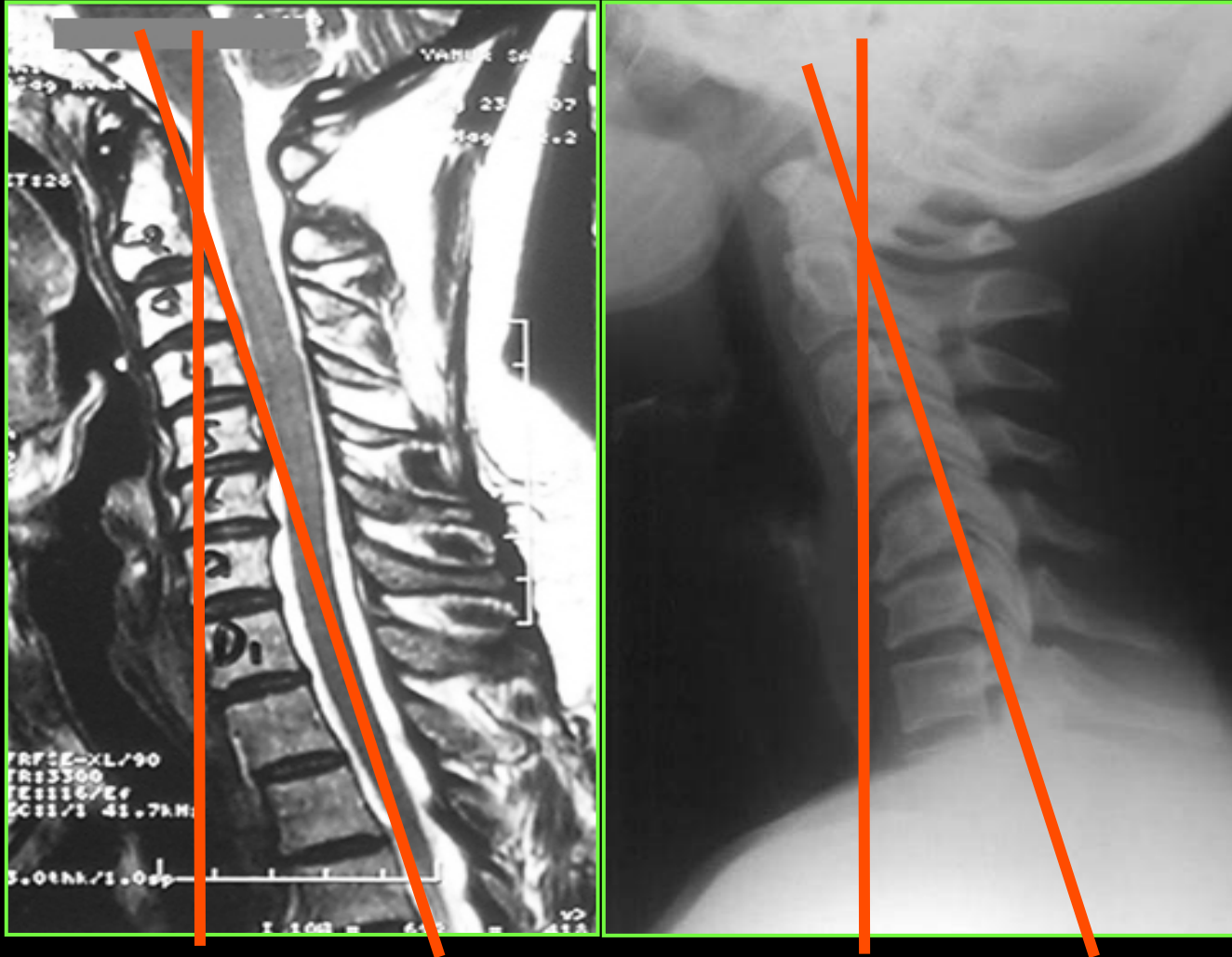
Cerrahi Sonrası Potansiyel Sorunlar ?

- Angulasyon
- Foramende daralma
- Komşu segment hastalığı

Sebepler ?

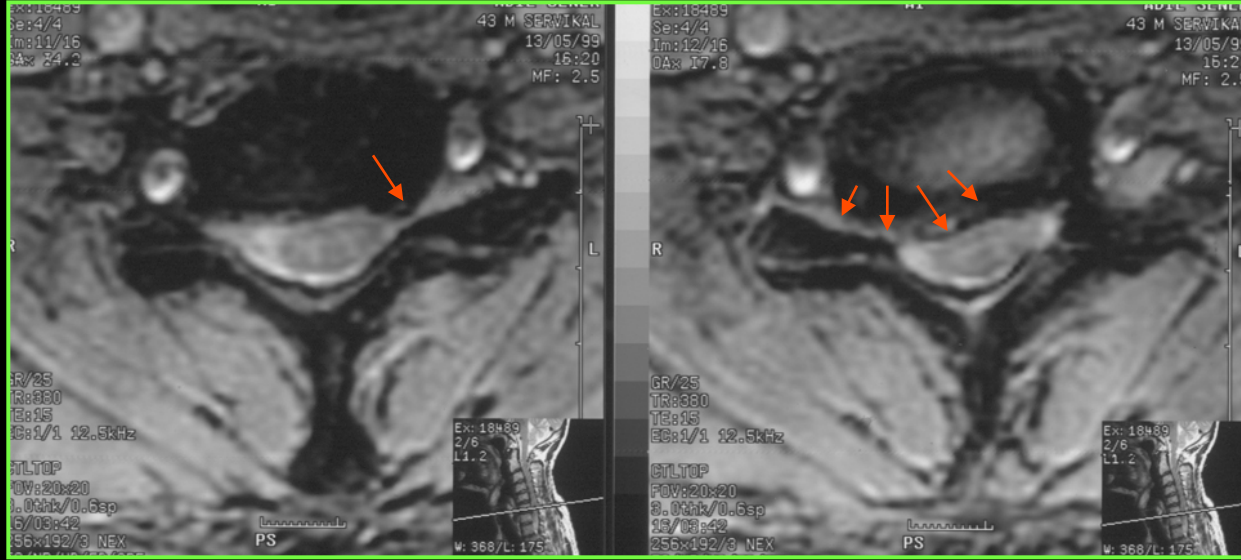
- Preoperatif direkt grafinin iyi deęerlendirilmemesi
- Luschka eklemlerinin aşırı alınması ve üst omur ile alt omur arasındaki ahengin bozulması
- Multilevel diskektomi

Cerrahi Öncesi Değerlendirme



Luschka Eklemlerinin Alınması

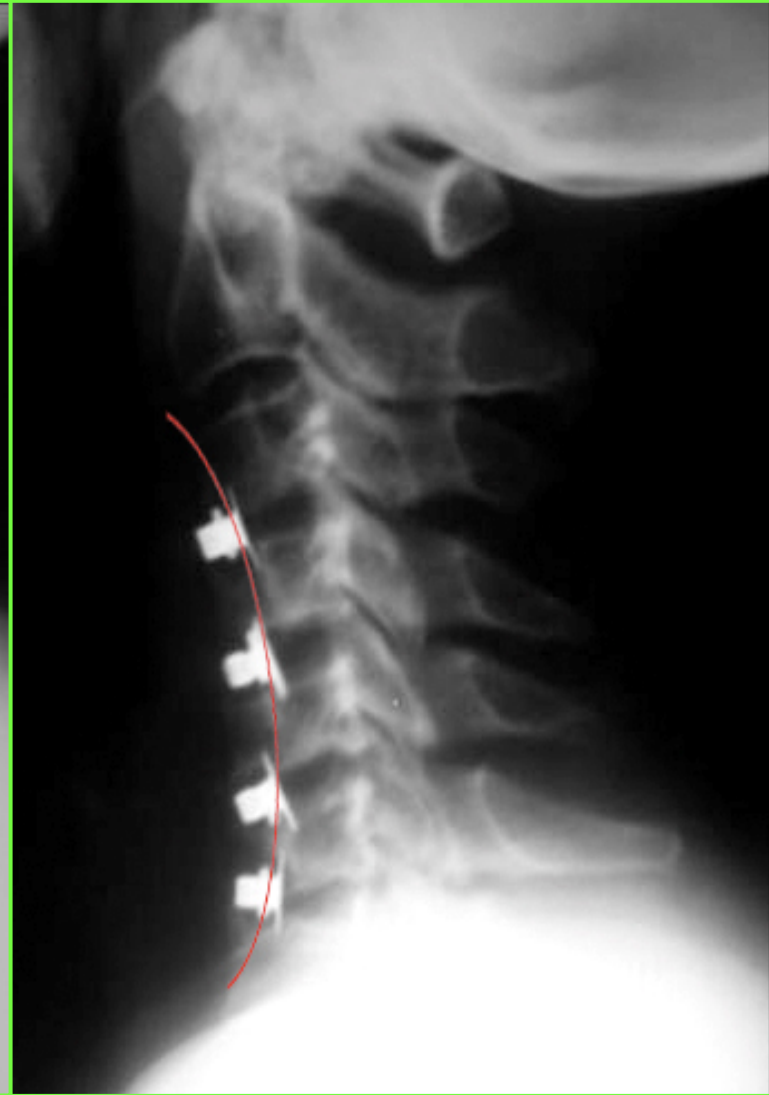
Ameliyat
öncesi



Ameliyat
sonrası



Birden fazla diskektomi



Anterior Servikal Yaklaşım

- Basit mikrodiskektomi
- Greft (otogreft/ allogreft)
- Greft+ Plak (rijit/ yarı rijit/ dinamik/ emilebilen)
- Kafes (cage)

Late Results of Anterior Cervical Discectomy and Fusion with Interbody Cages

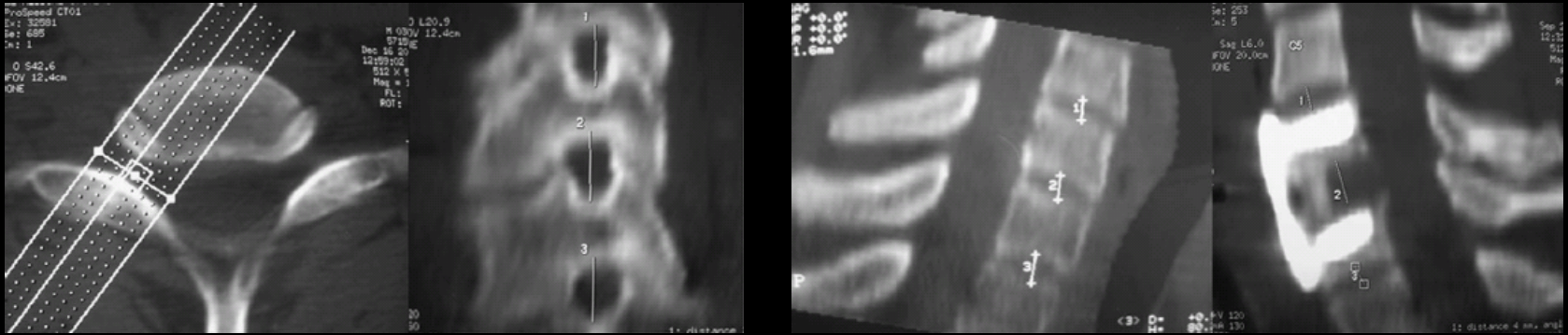
Murat Dađlı¹, Uygur Er², Serkan ŐimŐek¹, Murad Bavbek¹

- Servikal kafes uygulaması ile segmental lordoz ve segment yüksekliđi korunabiliyor

Anterior Cervical Microdiscectomy With or Without Fusion

Tunc Oktenoglu, MD,* Murat Cosar, MD,† Ali Fahir Ozer, MD,* Celal Iplikcioglu, MD,‡
Mehdi Sasani, MD,* Nazan Canbulat, MD,§ Cengiz Baybek, MD,|| and Ali Cetin Sarioglu, MD*

(*J Spinal Disord Tech* 2007;20:361–368)

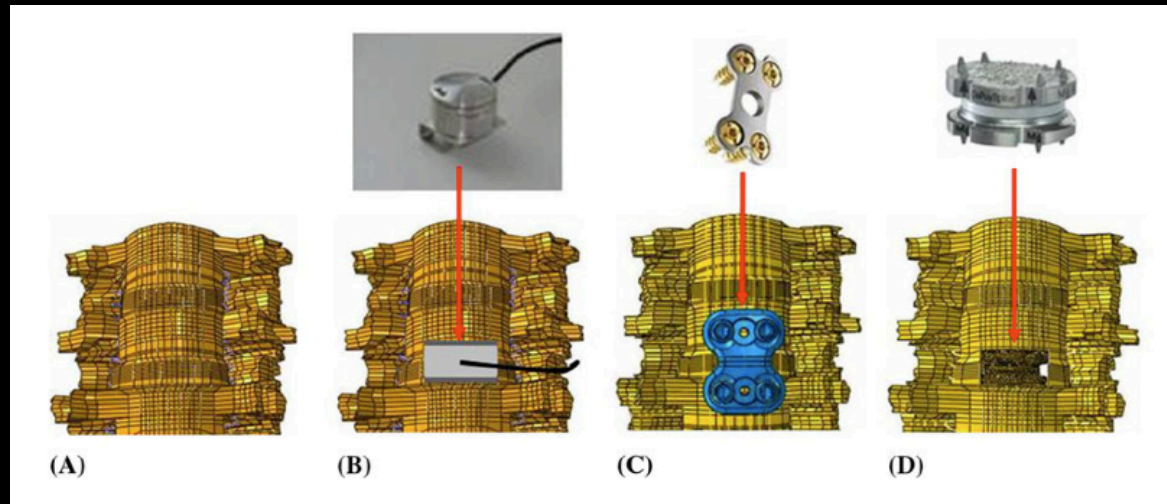


- Her iki tekniğin komşu segmentte etkisi yok
- Füzyon ve yarı-rijit plak erken dönemde disk mesafesi ve nöral foramen çapını sağlıyor ancak geç dönemde değil

Operated and Adjacent Segment Motions for Fusion versus Cervical Arthroplasty

A Pilot Study

Tomoya Terai MD, PhD, Ahmad Faizan PhD,
Koichi Sairyo MD, PhD, Vijay K. Goel PhD



- Artroplastisi ile cerrahi yapılan seviye ve komşu segmentte normale yakın hareket sağlanıyor
- Greft ile plak kullanımı füzyonu arttırıyor

ADJACENT SEGMENT PATHOLOGY OF THE CERVICAL SPINE

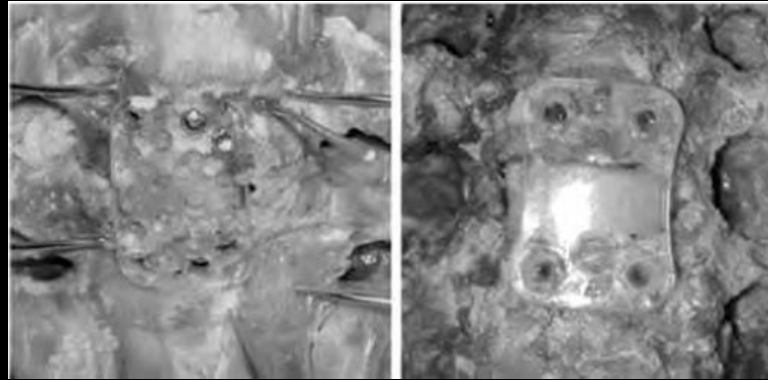
Adjacent Segment Pathology Following Cervical
Motion-Sparing Procedures or Devices Compared
With Fusion Surgery*A Systematic Review*Christopher Chambliss Harrod, MD,* Alan S. Hilibrand, MD,* Dena J. Fischer, DDS, MSD, MS,+
and Andrea C. Skelly, MPH, PhD†

- Disk protezi veya füzyon-plak cerrahisi sonrası radyolojik ve klinik komşu segment hastalığı arasında erken ve orta dönemde fark yok

Biomechanical analysis of a newly designed bioabsorbable anterior cervical plate

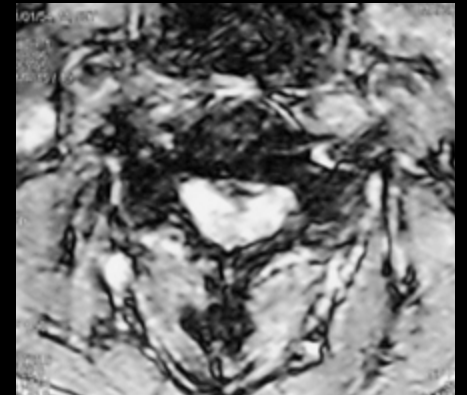
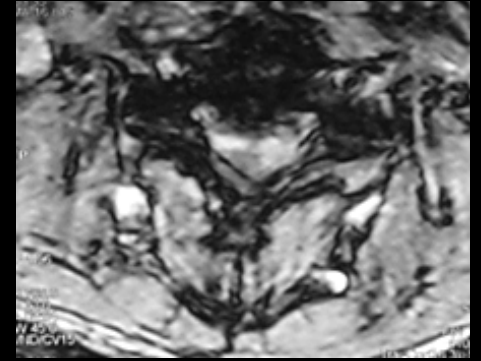
Invited submission from the Joint Section Meeting on Disorders of the Spine and Peripheral Nerves, March 2005

CHRISTOPHER P. AMES, M.D., FRANK L. ACOSTA JR., M.D., ROBERT H. CHAMBERLAIN, M.S., ADOLFO ESPINOZA LARIOS, M.D., AND NEIL R. CRAWFORD, Ph.D.



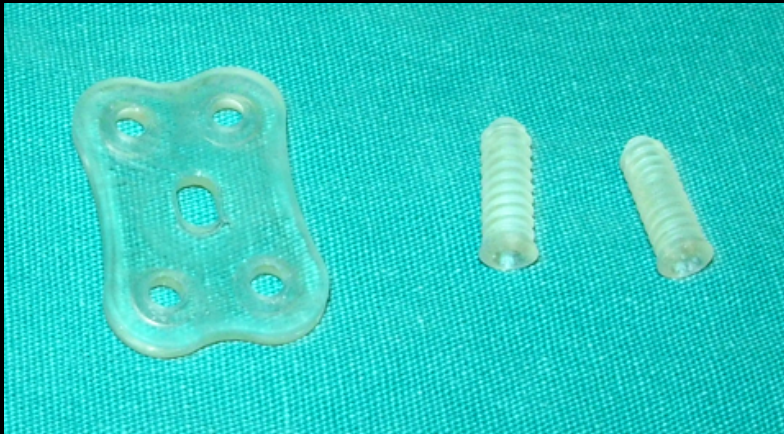
- Emilebilen plak ile intervertebral füzyon, yalnız emilebilen kafesten daha iyi bir stabilite sağlıyor
- Metal plaklardan daha iyi değil ancak alternatif olabilir

Yeniliklere açık olmalıyız ?

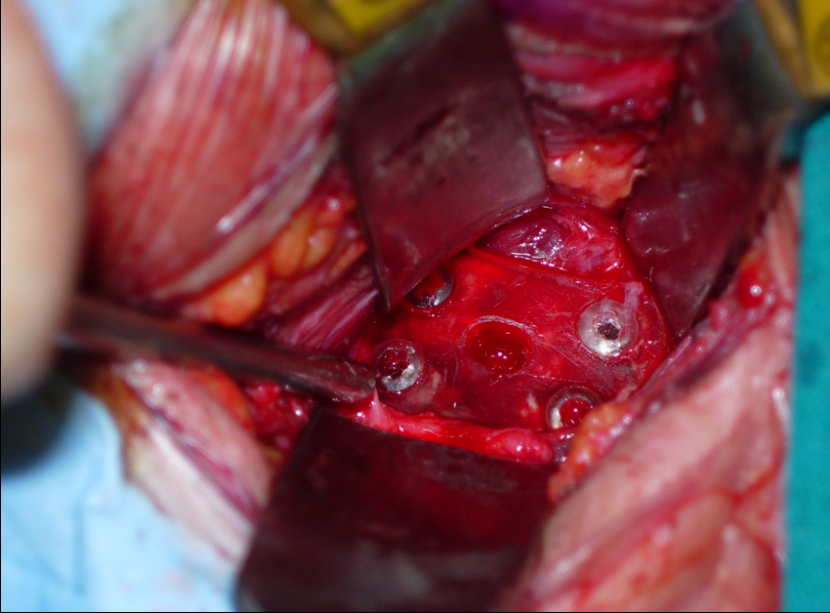


C3-4

Absorbe olabilen servikal plak

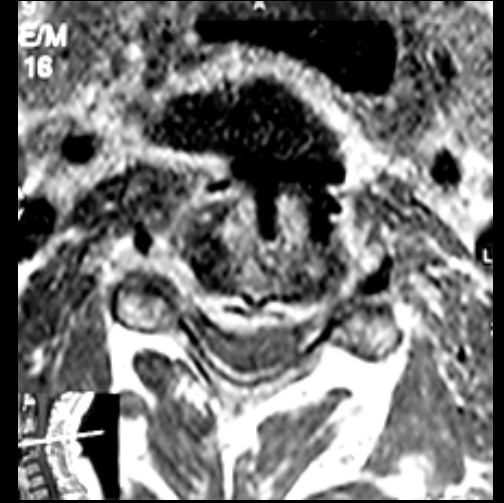
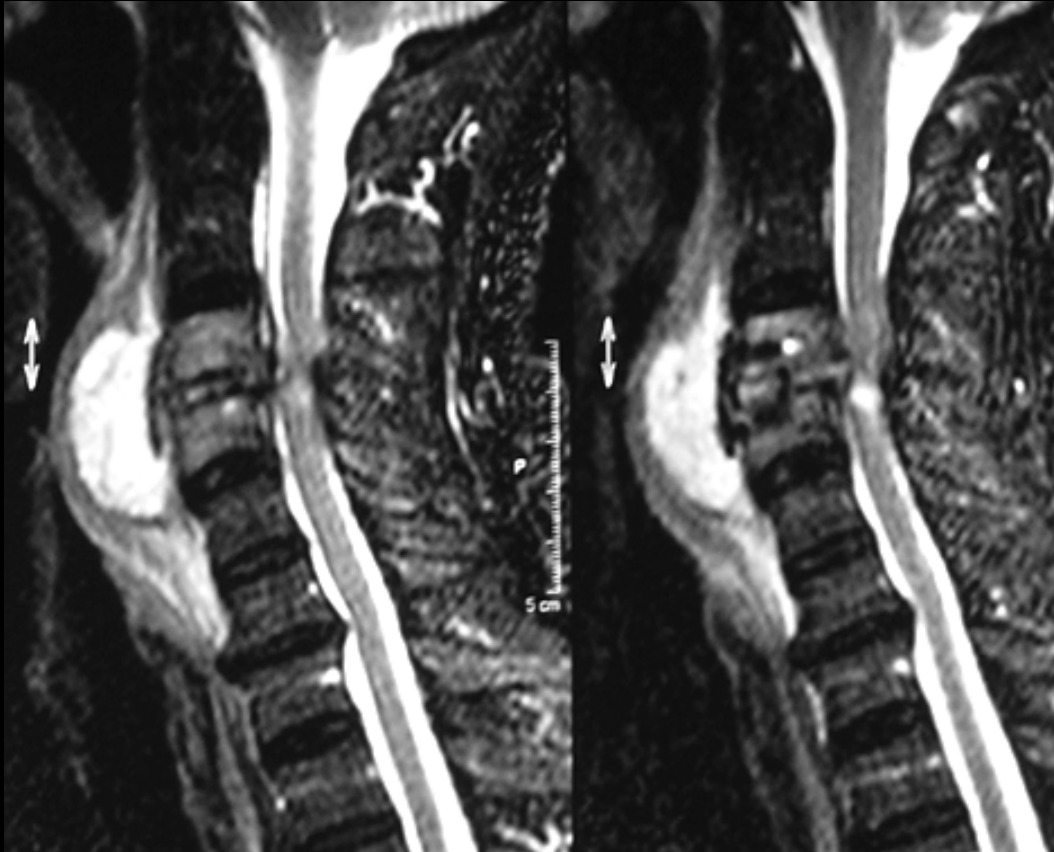


Perop. ve Postop 1.gün



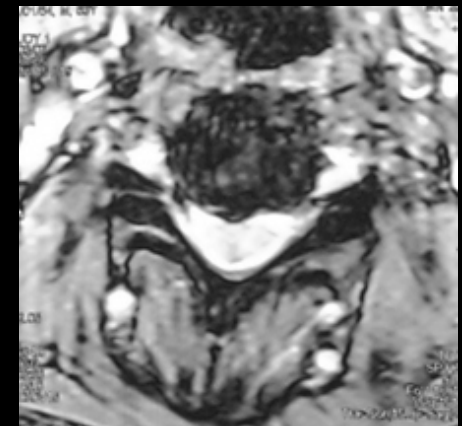
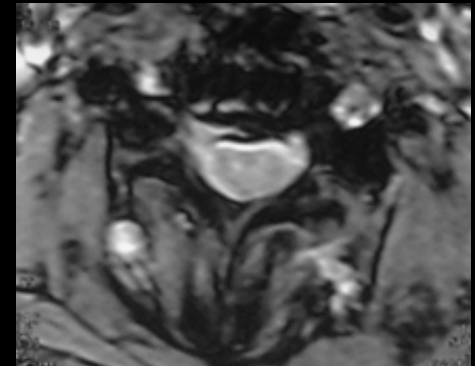
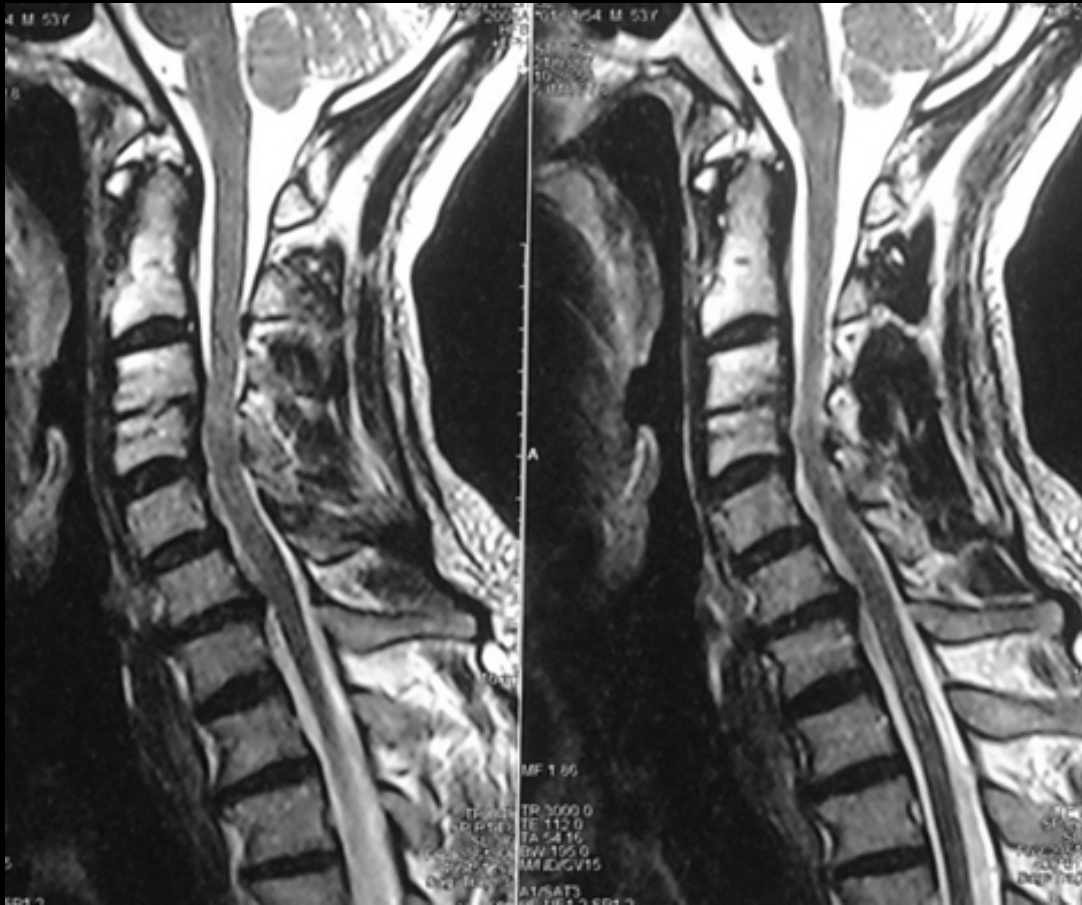
Postop 1.hafta

KÜLTÜR NEGATİF, AŞIRI İMMUN REAKSİYON ?



Tetraparezi ve disfaji

2.Postop 3.ay



Emilebilen greftler ile klinik ve radyolojik sonuçlar güvenli ve etkin olduklarını göstermektedir.

Vaccaro ve ark., Neurosurg Focus 2004

Emilebilen plaklar ile greft tek mesafe füzyon oluşumunda metal plaklara alternatif olarak kullanılabilir.

Aryan HE ve ark., Spine 2007

Emilebilen plaklar ile greft kayması ve deformite oranı metal plaklardan daha fazla

Tomasino A ve ark., J Neurosurg Spine 2009

Emilebilen plaklar ile greft atması ve erken dönem segmental yükseklik kaybı yüksek oranda görülüyor ve önerilmemektedir.

Lebl DR ve ark., Spine J 2012

Benim Yaklaşımım ?

- Küret veya tur ile son-plakların dekortike edilmesi
- Gerekirse Luschka eklemünde dekompresyon
- Posterior longitudinal ligamanın mutlak açılması
- Tek ve iki mesafe için kafes
- Üç mesafe için
 - plak ve allogreft ?
 - Korpektomi ?
 - Posterior yaklaşım ?
- Dren yok
- Boyunluk yok
- Ertesi gün mobilize

Tek seviye servikal diskektomi

Eur Spine J (2006) 15: 1339–1345
DOI 10.1007/s00586-005-0047-y

ORIGINAL ARTICLE

Stephen I. Ryu
Jesse T. Lim
Sung-Min Kim
Josemaria Paterno
Daniel H. Kim

Comparison
of dense cancellous
iliac autograft
for cervical

- Tüm greft tipleri aynı stabilizasyonu sağlıyor
- Plak fiksasyonu özellikle dışyana harekette stabilizasyonu artırıyor



Fibular
otograft



greft

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