

Tường thuật hội nghị

Hội nghiên cứu CS cổ Châu Á Thái Bình Dương

4-5 tháng 4 năm 2014

Khách sạn Majestic, TP HCM, Việt Nam

Hồ Quang Hưng

6/6/2014

CSRS (Cervical Spine Research Society), New York, 1973

CSRS-ES, 1984

CSRS-AP 1, Kobe, Japan, 2010

CSRS-AP 2, Busan, Korea, 2011

CSRS-AP 3, Fukuoka, Japan, 2012

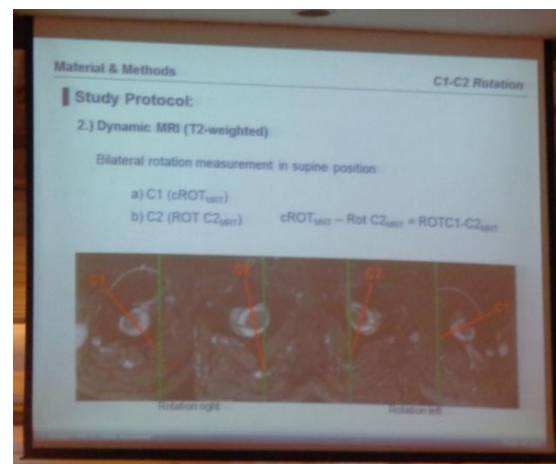
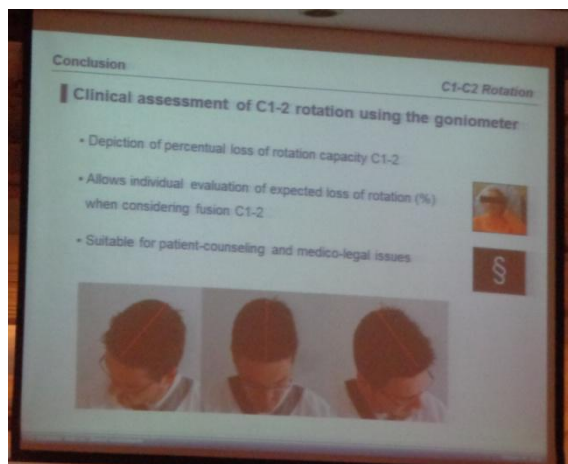
CSRS-AP 4, Seoul, Korea, 2013

CSRS AP 5 Việt Nam 2014

- 280 người tham dự
- 20 quốc gia
- Hơn 180 báo cáo gồm
 - 50 báo cáo E Posters
 - 5 bài giảng chủ tịch Châu Âu- Bắc Mỹ- Việt Nam
 - 12 bài giảng khách mời quốc tế
 - 114 báo cáo khoa học



Rotation C1-2



- Volunteer's age was 34yrs (25-48), BMI 27+/- 4
- Clinically, absolute cervical rotation (cROT) was 145 +/- 15; ROTC1-2 = 85+/-13
- On MRI, cROT-MRI = 120 +/- 15; ROTC1-2-MRI = 66 +/- 10
- %ROTC1-2 = 59+/-6 % cROT
- %ROTC1-2 = 55+/-7 % CROT-MRI

Michael Mayer (Germany, mayermichi@yahoo.de). Assessment of atlantoaxial rotation: can we rely on our clinical evaluation?

Viêm khớp C1-C2

Clinical Features

- 2 Components of the Pain
 - Somatic – From the C1-2 Facet
 - Neuralgic – From the juxtaposed C2 ganglion/root with retro-orbital radiation
 - Dramatic exacerbation with head rotation to ipsilateral side

Exam Findings

- Tender over ipsilateral C1-2 region
- Patients wince with head rotation
- Dramatic temporary resolution of both the pain and rotation restriction with ipsilateral C1-2 blockade

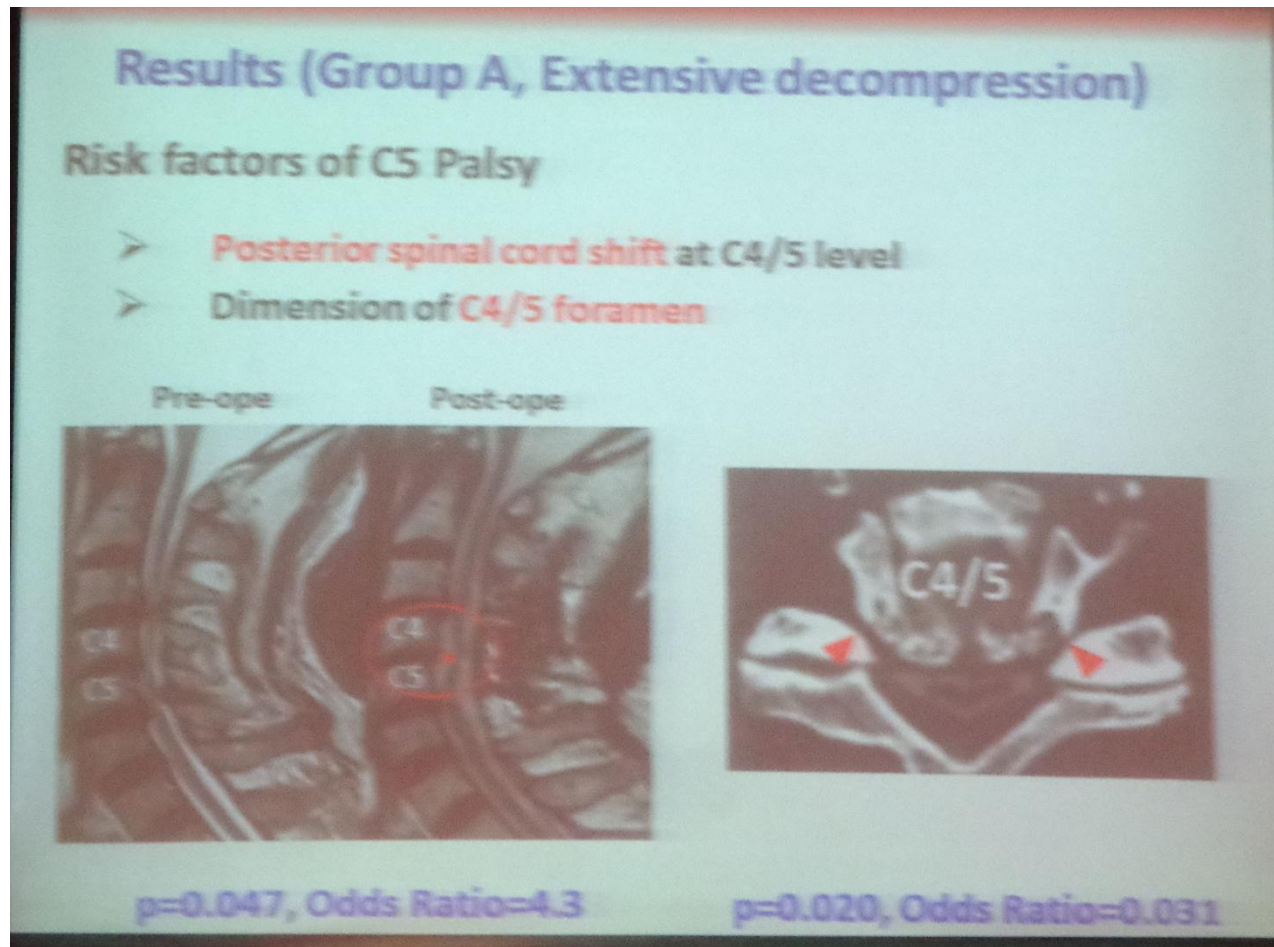
Radiological Findings

- Plane films may show arthritic C1-C2 joint. (N.B. arthrodesis of C2-C3 common)
- CT scan (sagittal and coronal reconstructs critical) : C1-C2 facet joint narrowing, rotatory subluxation, endplate sclerosis, subchondral bone cysts, osteophytes
- Flexion-extension films (no classic instability)
- MRI (C1-C2 facet changes missed by radiologist in 7 of 8 cases)

- Đau cổ cao và cằm dưới, đau tăng khi xoay đầu cùng bên
- Phong bế C1-2 làm giảm tạm thời triệu chứng
- Xquang: viêm C1-C2; CT scan, MRI: nhạy hơn Xq
- Mổ hàn C1-2 theo kĩ thuật Goel/Harms

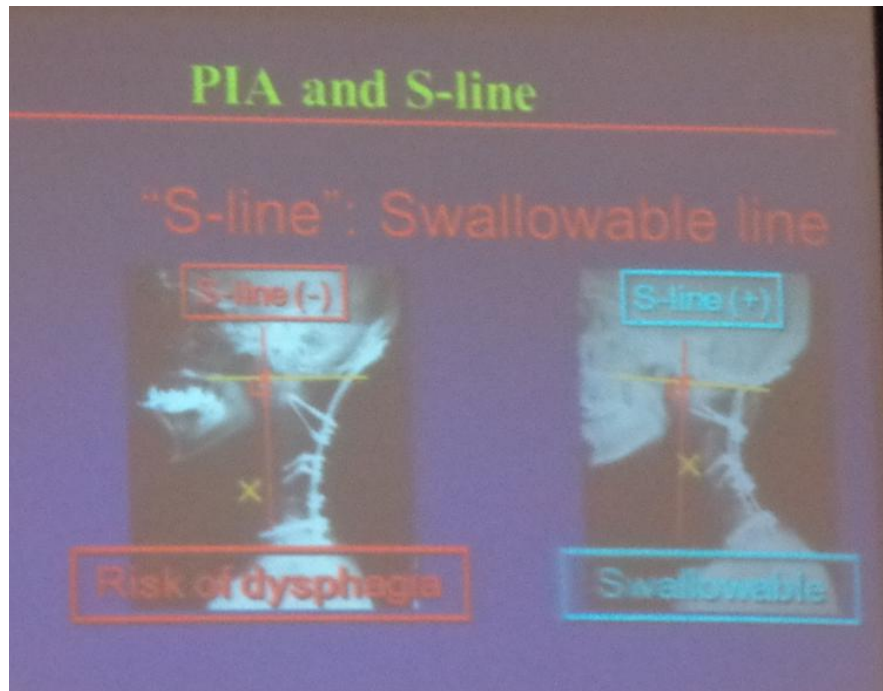
Duward Quentin (USA). C1-C2 Goel/Harms fusion for painful C1-C2 facet arthropathy with C2 neuralgia

Liệt C5 sau mổ tạo hình bản sống



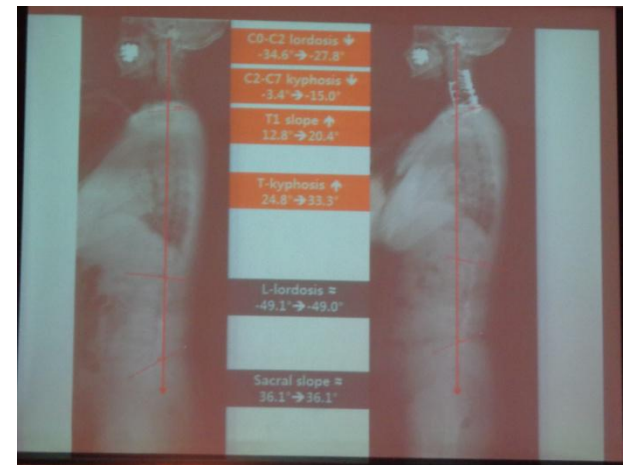
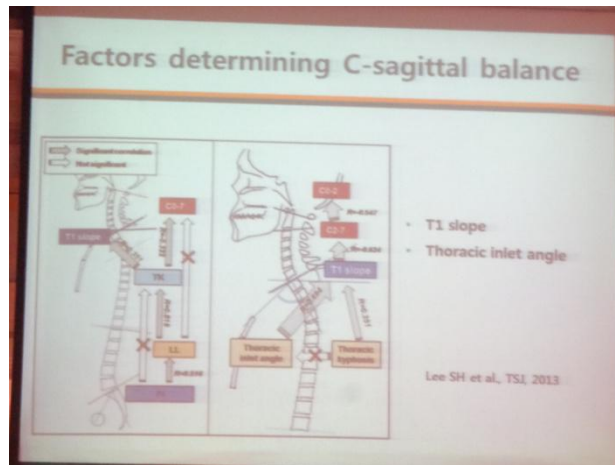
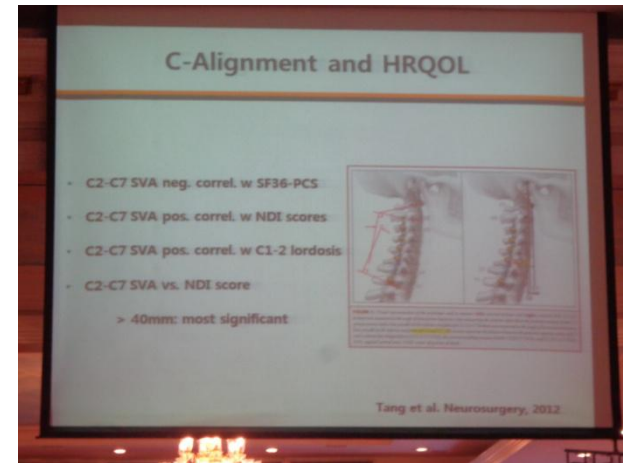
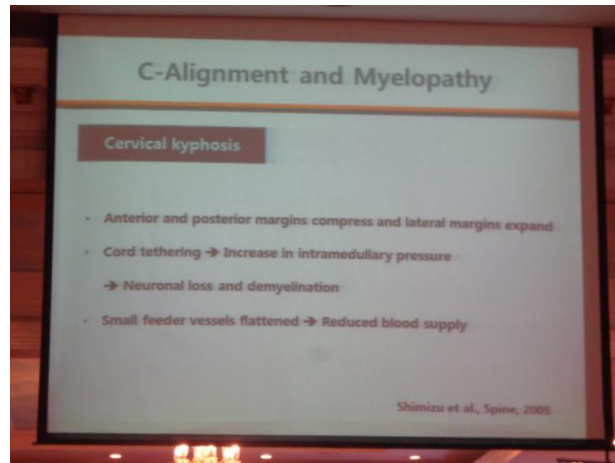
Satoshi Nori (Japan). Analysis of C5 palsy after selective laminectomy / laminoplasty in cervical spondylotic myelopathy

Tư thế đầu-cổ ảnh hưởng đến vấn đề nuốt



- PIA (pharyngeal inlet angle)
- PIA is defined as the angle between McGregor's line and the line that links the center of the C1 anterior arch and the apex of the cervical sagittal curvature
- $PIA > 90^\circ$: S-line (+), swallowable
- $PIA < 90^\circ$: S-line (-), risk of dysphagia

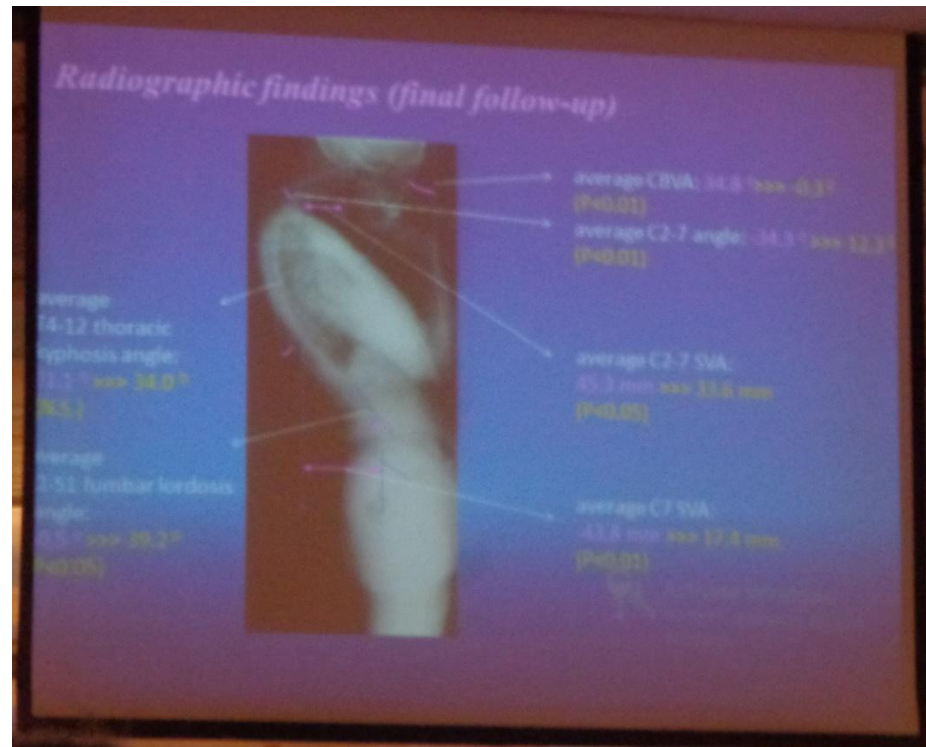
Canh hàng CS cổ (C-alignment)



Cervical lordosis is a parameter influenced by thoracic kyphosis and T1 slope

Dong-Ho Lee (Korea). The impact of surgical correction of cervical kyphosis on thoraco-lumbo-pelvic alignment

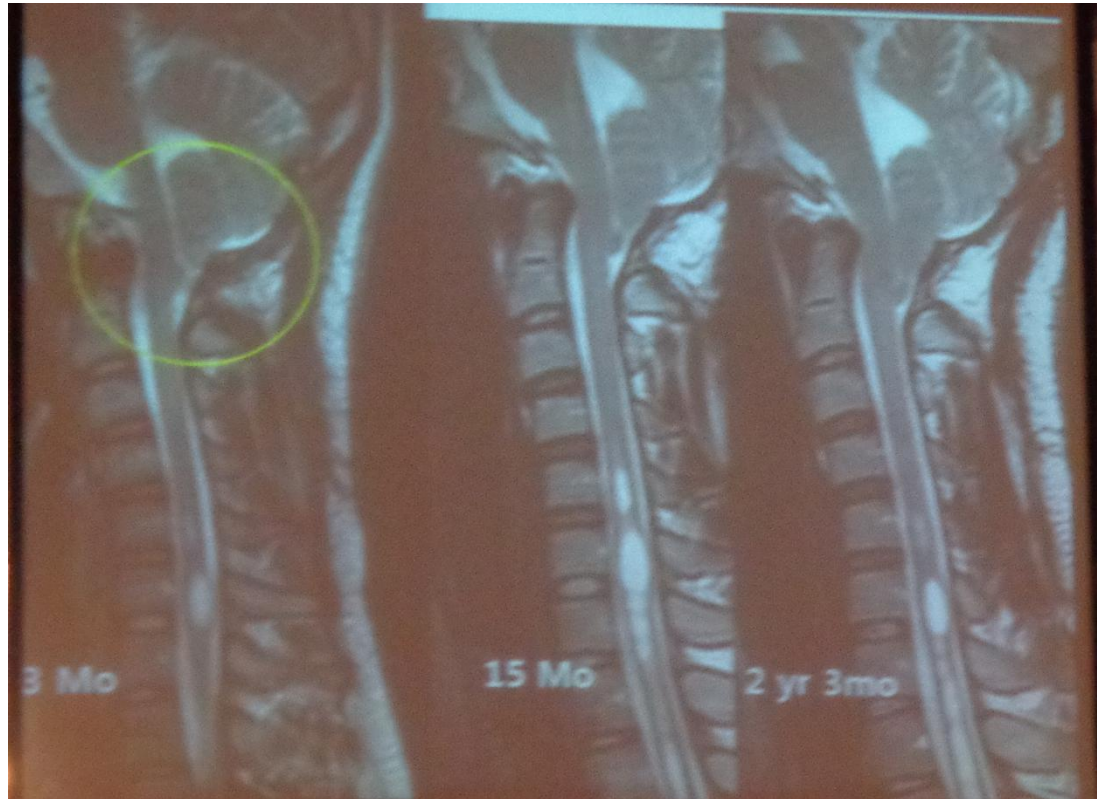
Dropped head syndrome



Yunichi Yamane (Japan). Postoperative alignment after selective laminectomy with muscle preservation for cervical spondylotic myelopathy

Masao Koda (Japan). Dropped head syndrome after cervical laminoplasty: a case control study

Chiari malformation



Thoát vị não sau vào lỗ lớn nền sọ, gây hẹp, làm tăng tốc độ dòng chảy dịch não tủy, tạo nang trong tủy sống (theo định luật Ventouri)

Chun Kee Chung (Korea). Surgical outcome of Chiary malformation types 1.0 and 1.5

OPLL

The pathology of OPLL

Symptom = Static Stenosis X Dynamic factor



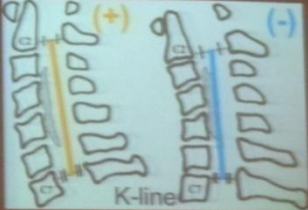
Azuma Y et al
J Spinal Disord Tech 2010

Mochizuki M et al
J Neurosurg Spine 2009

Fujiyoshi T et al
J Clin Neurosci 2010

Methods

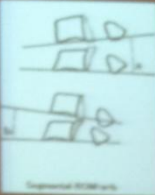
1. Type of ossification
(mixed, continuous or segmental type)
2. OPLL occupation ratio (%)
3. Sagittal alignment,
C2-7 angle
4. K-line
(+) on line or (-)-type



Fujiyoshi Spine 2008

Methods

5. The continuity of the ossification
at the maximum cord compression level
6. Segmental range of motion
(ROM) at the maximum cord
compression level
7. Relations between OPLL
occupation ratio and segmental range of motion
at the maximum cord compression level



Masaki JBCT 2007

Keishi Maruo (Japan). The impact of dynamic factors on clinical outcome after laminoplasty for cervical myelopathy due to ossification of the posterior longitudinal ligament

JOA


Background

Japanese Orthopaedic Association (JOA) score

Motor function	
– Upper extremity (0–4)	
• Fingers	
• Shoulder and elbow	
– Lower extremity (0–4)	
Sensory function	
– Upper extremity (0–2)	
– Trunk (0–2)	
– Lower extremity (0–2)	
Bladder function	(0–3)

Total score: 0–17

Recovery rate



Cervical spondylotic myelopathy

background

Motor dysfunction of upper extremity

Yonenobu, *Spine* 1986

- 0 Inability to feed oneself
- 1 Inability to handle chopsticks, but able to eat with spoon
- 2 Ability to handle chopsticks with much difficulty
- 3 Ability to handle chopsticks with slight difficulty
- 4 None


Modified JOA (mJOA)

Modification for Western culture

Benzel, *J Spinal Disord* 1991

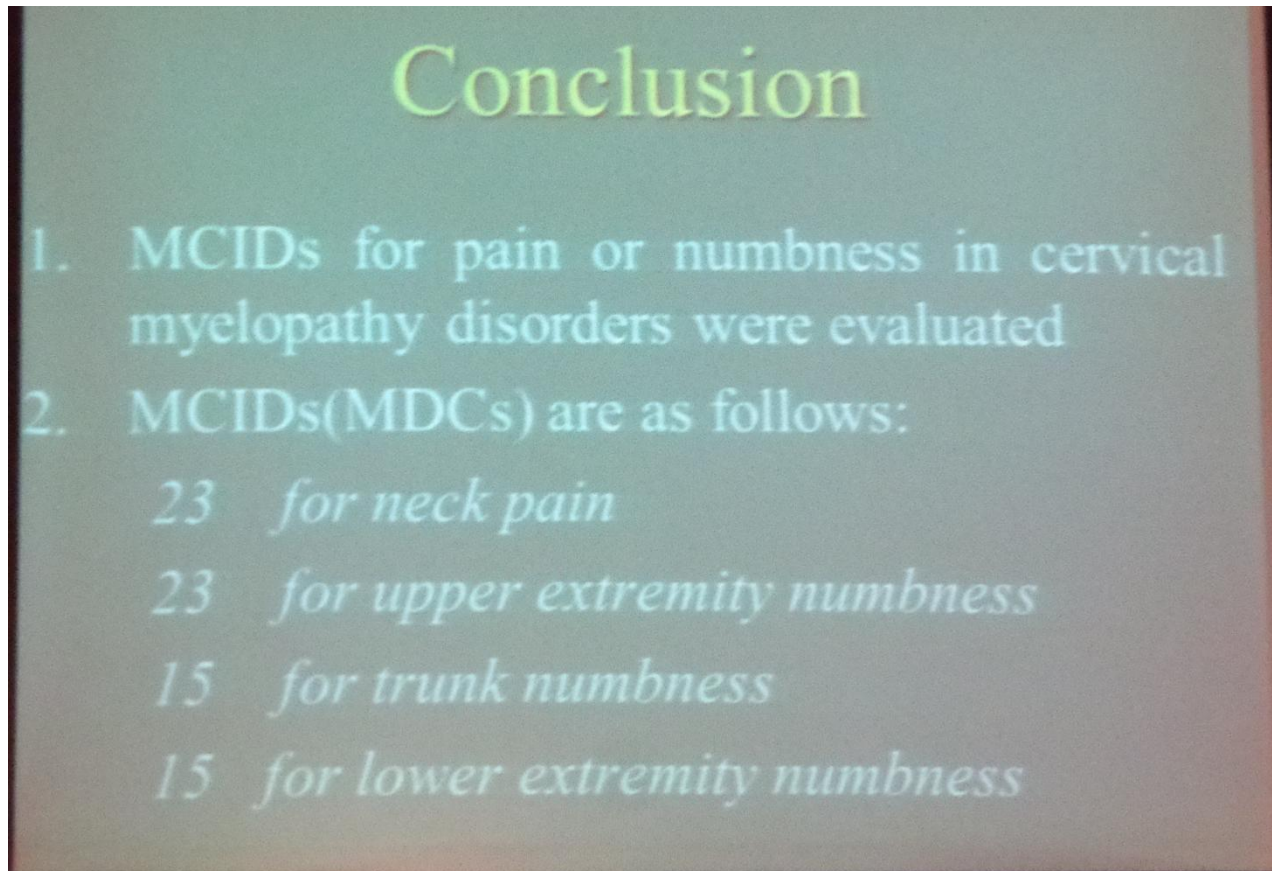
Motor function	
– Upper extremity (0–5)	
– Lower extremity (0–7)	
Sensory function	
– Upper extremity (0–3)	
– Trunk	
– Lower extremity	
Bladder function	(0–3)

Total score: 0–18



So Kato (Japan). Comparison of Japanese Orthopaedic Association score (JOA score) and modified JOA score for the assessment of cervical myelopathy

Khoảng thay đổi tối thiểu (MCID: Minimal clinically important difference)



Conclusion

1. MCIDs for pain or numbness in cervical myelopathy disorders were evaluated
2. MCIDs(MDCs) are as follows:
 - 23 for neck pain*
 - 23 for upper extremity numbness*
 - 15 for trunk numbness*
 - 15 for lower extremity numbness*

Sử dụng VAS (visual analogue scale) 100 điểm để lượng giá mức độ đau hay tê, đối chiếu với JOA

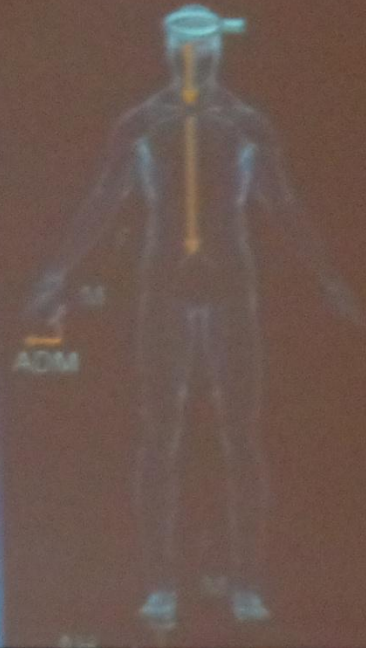
Eiji Wada (Japan). Minimal clinically important difference (MCID) of visual analogue scale in cervical myelopathy disorders

Đo điện sinh lý

Measurement of the CMCT

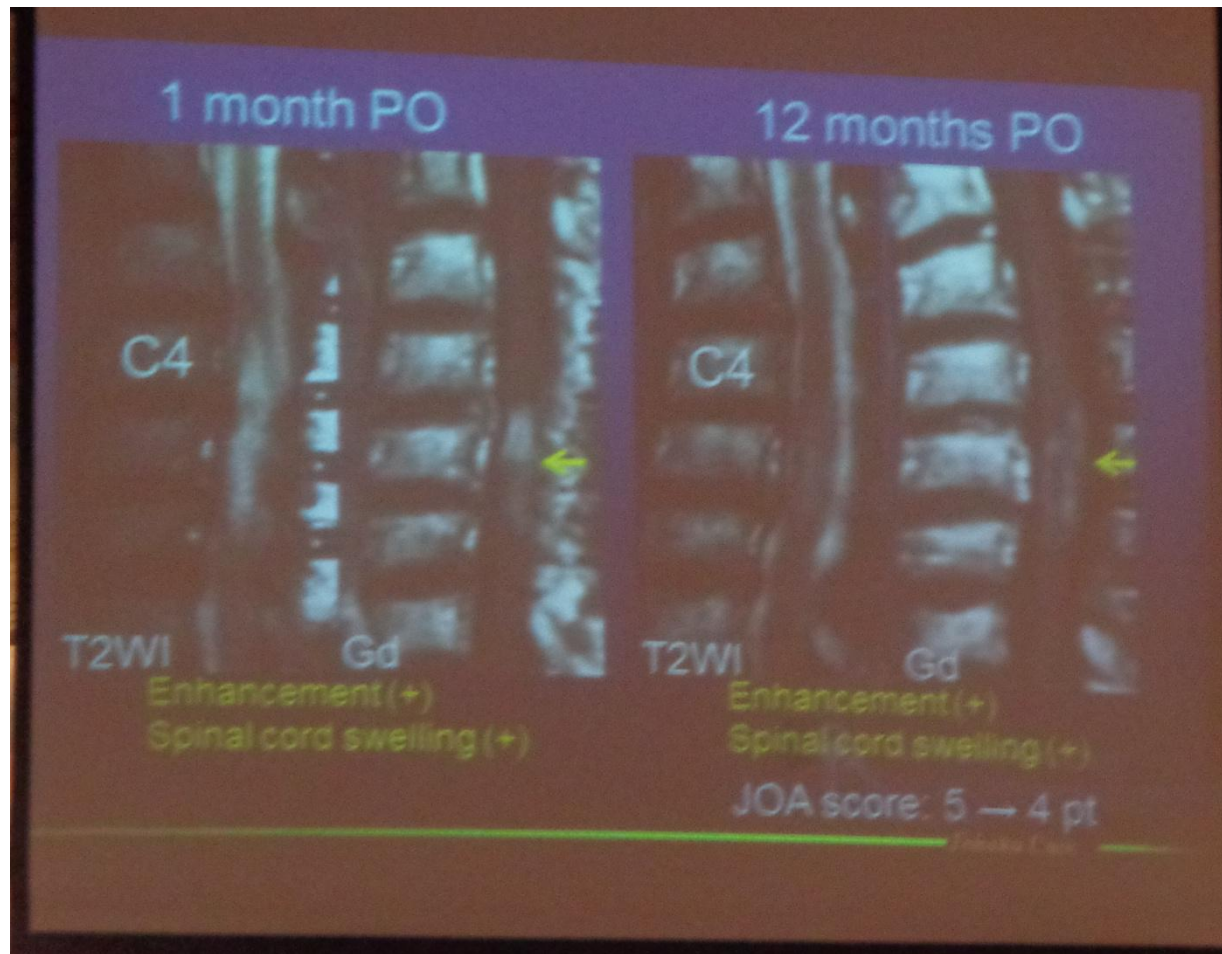
- Ludolph AC. *Electroencephalogr Clin Neurophysiology* 1987
- Robinson LR. *Muscle Nerve* 1988

1. MEP latency
2. M-wave and F-wave latencies
3. Peripheral conduction time: PCT
 - $(M\text{-wave latency} + F\text{-wave latency} - 1) / 2$
4. $CMCT = MEP \text{ latency} - PCT$



Kazuyoshi Nakanishi (Japan). Electrophysiological evidence of functional improvement in the corticospinal tract after laminoplasty in the patients with cervical compressive myelopathy

Phù tủy sau mổ



Hiroshi Ozawa (Japan). Postoperative spinal cord swelling and intramedullary Gd-DTPA enhancement in cervical spondylotic myelopathy

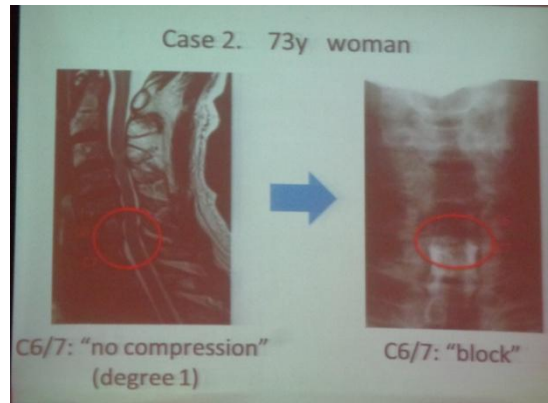
Độ tin cậy của MRI trong việc đánh giá trước mổ sự chèn ép tủy ở tầng C6/7

Kinematic MRI

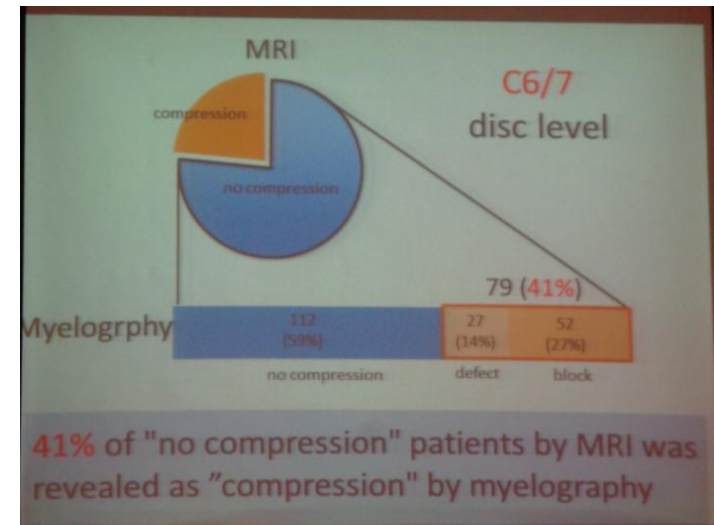
- Dynamic MRI is useful to determine more accurately the number of levels where the spinal cord is compromised (Zhang L, Spine. 2011)
- Neck extended MRI significantly increases the severity of cord compression compared with the neutral position (Bartlett RJ, Br J Radiol. 2012)
- The evaluation of CSM may be improved with dynamic MR images (Kim CH, Acta Neurochir. 2014)

Is Kinematic MRI really better than myelography?

Case 2. 73y woman

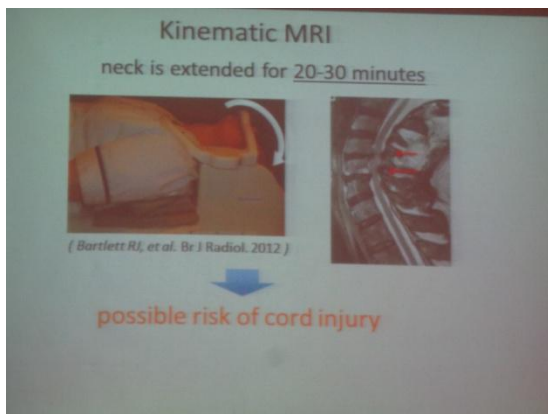


C6/7: "no compression" (degree 1) C6/7: "block"



Kinematic MRI

neck is extended for 20-30 minutes



possible risk of cord injury

Discussion

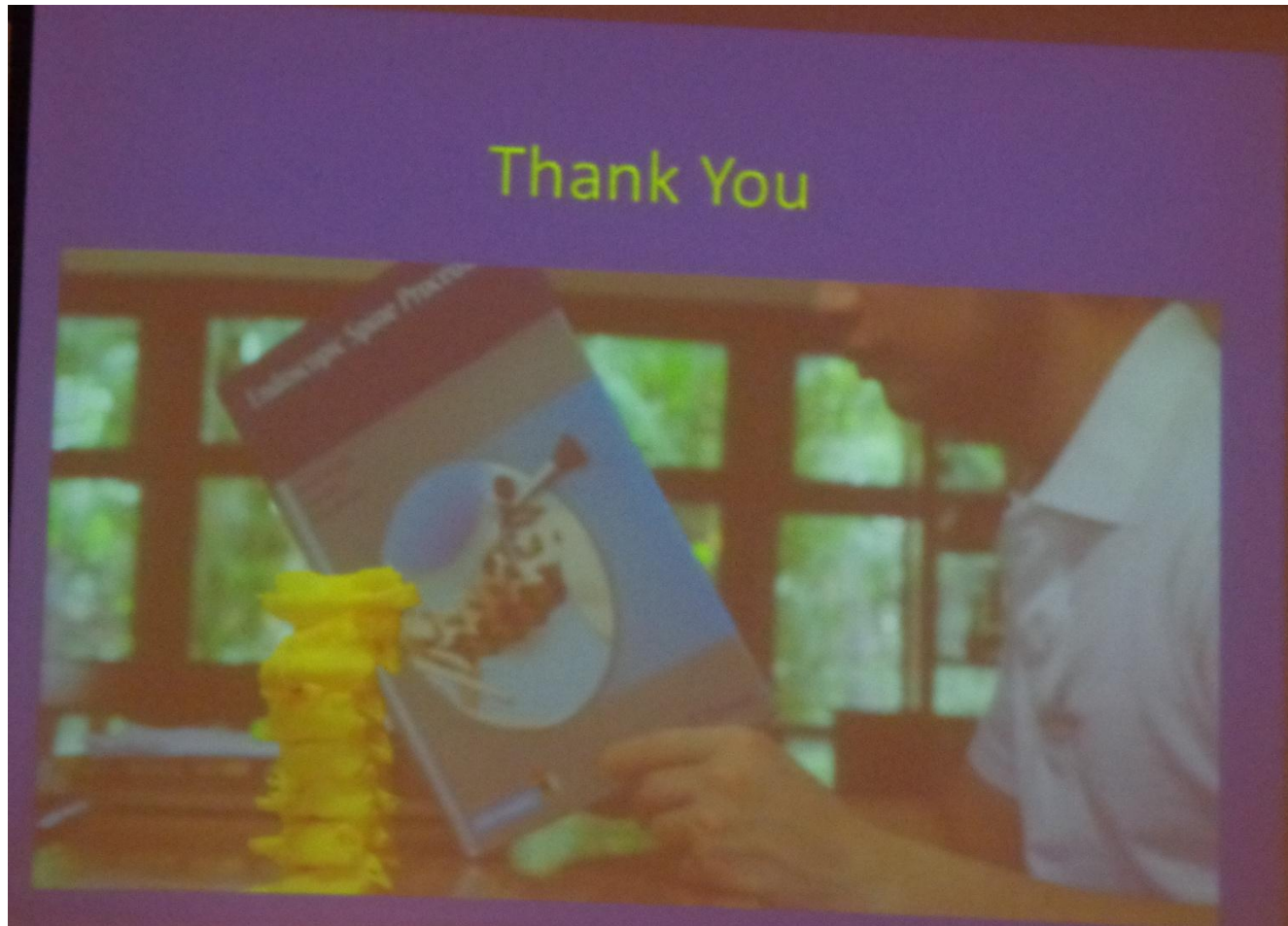
- C7 lamina plays a critical role in maintaining the stability of the cervical spine (Pal GP, J Anat. 1996)
- Axial pain may be prevented by preserving the C7 spinous process and its muscle and ligament attachments (Hosono N, Eur Spine J. 2006)

the stenotic conditions at C6/7 and C7/T1 disc levels are important to decide the caudal end of the decompression

- MRI chưa chắc nhạy nhất

Akihiro Koh (Japan). Reliability of MRI for the preoperative assessment of compression at C6/7 disc level

3D printer



Rafael Cruz Bundoc (Philippine). Preoperative templating using desktop 3D printing for cervical spine surgery

Điều trị bệnh lý rễ cổ (radiculopathy)

- Hai phương pháp chính:
 - Giải áp lồi trước và hàn xương (ACDF: anterior decompression and fusion)
 - Thay đĩa nhân tạo (ADR: articular disc replacement)
- Mục đích chính của ADR là ngăn ngừa thoái hóa vùng lân cận (ASD: adjacent segment degeneration)
- Nghiên cứu RCT cho thấy kết quả tương đương nhau theo thang điểm NDI (Neck Disability Index)



Andre Jackowski (UK). Treatment of cervical radiculopathy- Its past history and future direction

Martin Skeppholm (Sweden). Artificial disc replacement versus fusion in cervical radiculopathy – Is there more to discover? A randomized controlled trial with two years of follow-up

PGS.TS. Võ Văn Thành

Chủ tịch CSRS AP



Chấp pháp như sơn
Trì tâm như ngọc thủy
Thường thần như xuân
Thạnh khí vi thu

My background:

1967- 1974: graduate training with 3 years- basic sciences and 4 years: clinical sciences

1 year as Intern in Neurology Department, Cho Ray Hospital, Sai Gon (Dr Nguyen Nhat Thong)

1 year as neuro-radiology technician in Neurosurgery Department, Sai Gon (Professor Dang Van Chieu)

My 7 years graduate training was under the American Medical School curriculum supported successfully by the American Medical Association (AMA)'s 10-years project led by Dr Ira Singer (AMA) and Professor Norman Hoover- Former Head of Department of Orthopedics, Mayo Clinic (Rochester Minnesota). All the same basic and medical textbooks were supported by American Medical Association in this period (1965-1974).

1975- 1980: post- graduate training in post-war period in 5 years

It would be the best if we can create a shorter spine training program.

We can cut off the four limbs and pelvic ORTHOPEDIC surgery, NEURO BRAIN AND SKULL surgery from the spine training curriculum.

The curriculum of spine surgeon training should be concentrated on spine and spine related sciences.

The spine specialty would be the independent department of the medical school as well.

18+6+ 5 (?)= SPINE SPECIALIST

Save time for training

Save money for training