

Surgical outcome of elderly patients over 80 years with cervical spondylotic myelopathy

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Introduction

- Surgical therapy for CSM has been increasing in elderly patients.

(Madhavan et al. Neurosurg focus 2016)

- Many previous reports show the surgical outcomes of CSM in elderly patients over 65 or 75 years.

(Machino et al. Spine 2015)

(Nakashima et al. Neurosurgery 2015)

- There was a few reports about CSM over 80 years.
 - Small numbers of patients
 - Including several surgical techniques

(Nagano et al. Orthopedics 2004)

(Nagashima et al. Eur Spine J 2011)

Objective

To assess the surgical outcomes of posterior cervical decompression in the elderly patients with CSM over 80 years with the large sample size.

Methods

- Multicenter study (17 institutions)
- Posterior decompression surgery
- 1 year follow up

1227 patients



[exclusion criteria]

OPLL, CDH, infection, neoplastic disease, RA, AS
Anterior surgery, Posterior fixation

881 patients
(mean age 67.3)



Younger group
< 80 years

N=762

Elderly group
 \geq 80 years

N=119

Results

	Elderly (n=119)	Younger (n=762)	P value
Age	83.7 ± 2.9 y/o (80-93)	61.5 ± 10.7 y/o (27-79)	
Female/ male	57/ 62	228/ 534	< 0.05
Height	152 ± 9 cm	161 ± 10cm	< 0.001
weight	52 ± 10 kg	62 ± 12 kg	< 0.001
BMI	22.4 kg/m ²	23.8 kg/m ²	< 0.001

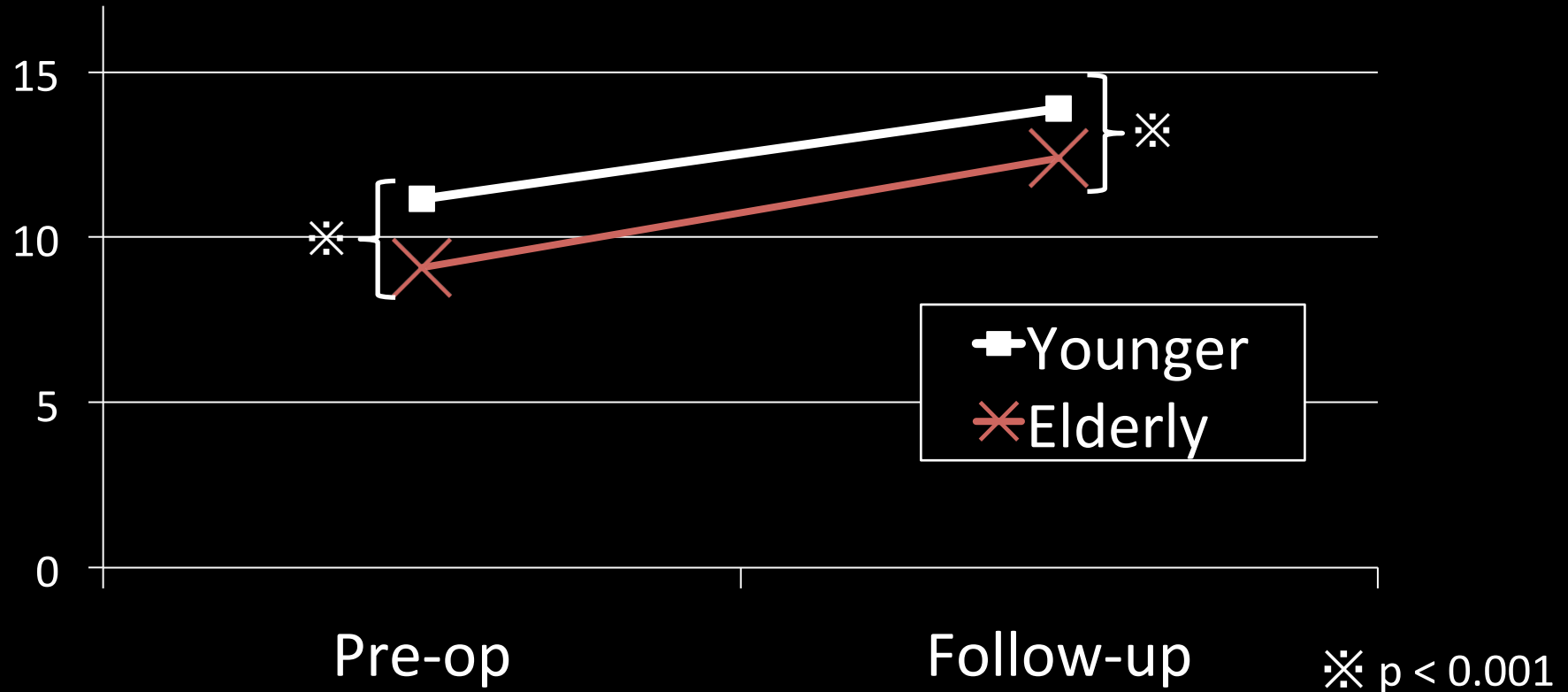
Comorbidities	Elderly (n=119)	Younger (n=762)	P value
Hypertension	72 (61%)	300 (39%)	< 0.001
Ischemic heart disease	13 (11%)	30 (4%)	< 0.01
Renal failure	9 (8%)	18 (2%)	< 0.01
Diabetes	23 (19%)	154 (20%)	0.90
Malignant tumor	9 (8%)	37 (5%)	0.26
Cerebrovascular disease	8 (7%)	28 (4%)	0.13
Respiratory disease	10 (8%)	31 (4%)	0.06
Collagen disease	0 (0%)	9 (1%)	0.62
Mental disease	1 (1%)	32 (4%)	0.11

Surgical factors	Elderly (n=119)	Younger (n=762)	P value
Operating duration	97 ± 51 min (37-239)	101 ± 47 min (24-269)	0.17
Estimated blood loss	47 ± 60 ml (5-324)	50 ± 85 ml (5-800)	0.29

Complication	Elderly (n=119)	Younger (n=762)	P value
Delirium	4 (3%)	4 (1%)	< 0.05
Worsening of neurological status (w/o C5 palsy)	8 (7%)	15 (2%)	< 0.01
C5 palsy	2 (2%)	16 (2%)	0.55
Hematoma	0 (0%)	10 (1%)	0.37
SSI	0 (0%)	4 (1%)	0.55

The clinical outcomes of the surgery by JOA score

(/ 17points)



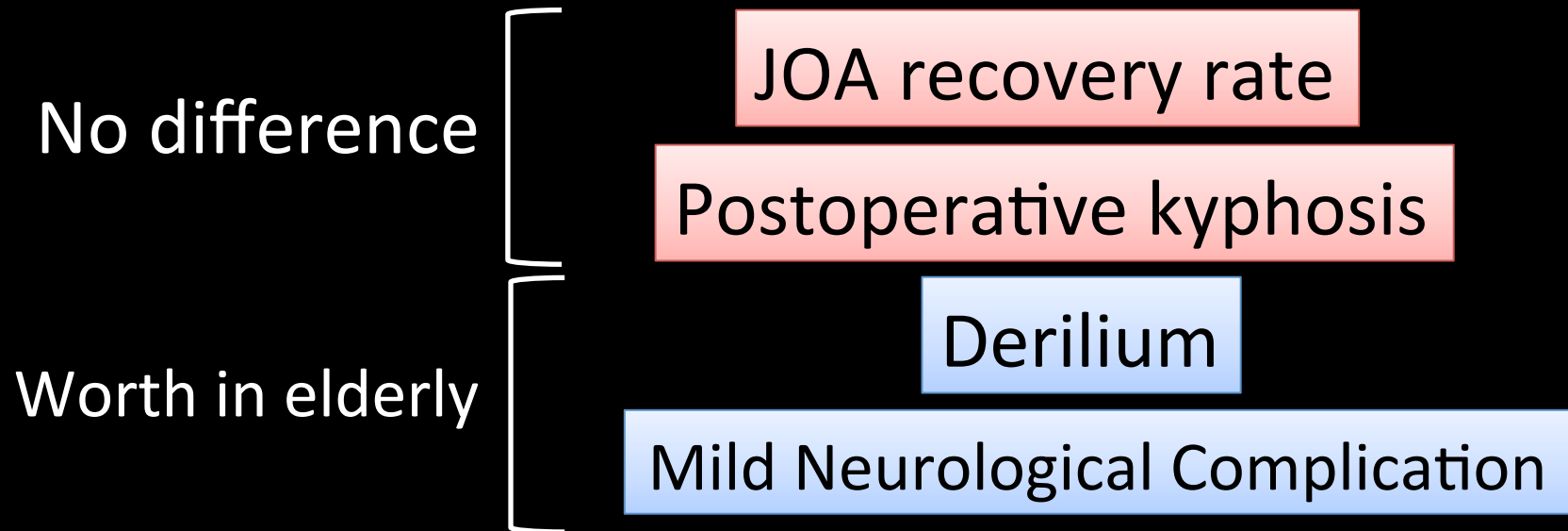
	Elderly	Younger	P value
Recovery rate	39 ± 26 %	45 ± 38 %	0.10

Discussion

	Study Design	No. of Pts (Elderly)	Definition of elderly	Surgical technique
Nakashima 2015	Prospective	479 (119)	> 65 y/o	ACDF, Laminoplasty
Chen 2015	Retrospective	136 (58)	> 70 y/o	ACDF, Laminoplasty
Machino 2015	Prospective	505 (118)	> 75 y/o	Laminoplasty
Yoshida 2013	Prospective	369 (76)	> 75 y/o	Laminoplasty
Nagashima 2011	Prospective	161 (37)	> 80 y/o	ACDF, Laminoplasty
Nagata 1996	Retrospective	173 (50)	> 65 y/o	ACDF, Laminoplasty
This study	Retrospective	881 (119)	> 80 y/o	Laminoplasty

- The multicenter study with the largest sample size of elderly patients over 80 years with CSM

Clinical outcome of elderly patients



The surgical treatment for the elderly patients over 80 years is an effective procedure.

Informed consent should be needed thoroughly

Conclusion

- This is the first multicenter study with the largest sample size to examine the surgical outcome of elderly patients over 80 years with CSM.
- No significant difference in JOA recovery rate.
- The surgical treatment for the elderly patients over 80 years is an effective procedure.

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COI Disclosure

The author have no financial conflicts of interest
to disclose concerning the presentation.