

Pulmonary function and health-related QOL in surgically-treated patients with malignant pleural mesothelioma.



# Shinichiro Morishita<sup>1,2</sup>, Takashi Tanaka<sup>3</sup>, Masaki Hashimoto<sup>4</sup>, Seiki Hasegawa<sup>4</sup>, Kazuhisa Domen<sup>2</sup>

1 Institute for Human Movement and Medical Sciences, Niigata University of Health and Welfare, Niigata, Japan 2 Department of Physical Medicine and Rehabilitation, Hyogo College of Medicine, Nishinomiya, Japan 3 Department of Rehabilitation Medicine, Hyogo College of Medicine Hospital, Nishinomiya, Japan 4 Department of Thoracic Surgery, Hyogo College of Medicine, Nishinomiya, Japan

## Introduction

• Malignant pleural mesothelioma (MPM) is a rare form of cancer that affects the thin cell wall lining of the

## Participants

The study included 22 patients who underwent P/D for MPM between Dec 2013 and March 2015.

body's internal organs and structures.

- Studies have shown that patients with lung cancer have decreased pulmonary function and exercise capacity after compared to before pneumonectomy.
- In previous research, pulmonary function and healthrelated quality of life (HRQOL) in surgically-treated MPM patients have not been evaluated in detail.

#### Purpose

The aim of this study was to assess pulmonary function and HRQOL in MPM patients following pleurectomy/decortication (P/D).



Baseline Characteristics of S	Study Groups (n=22)		
Characteristics			
	Median		
Age(years)	64 (range 54-77)		
	Mean (SD)		
Weight(kg)	64.4 (11.8)		
Height(m)	1.64 (0.09)		
Body mass index(kg/m <sup>2</sup> )	23.8 (2.7)		
Sex	n(%)		
Men	20 (91%)		
Women	2 (9%)		
Diagnosis	n(%)		
Malignant pleural	22 (100%)		
mesothelioma(MPM)	22 (10070)		
Disease stage at surgery	n(%)		
Ι	12 (55%)		
Ι	8 (36%)		
Ш	2 (9%)		
Affected side	n(%)		
Right	12 (55%)		
Left	10 (45%)		
	Median		
Duration of disease(month)	5 (range 3-8)		
Number of chemotherapy cycles	3 (range 2-5)		

# Methods

This study was a prospective, observational investigation of pulmonary function and healthrelated QOL of patients undergoing P/D for MPM.

Evaluation	Surgery for MPM		Evaluation
- 2 days	0 d <mark>ay</mark>		+ 15 days
Pulmonar	y function	QOL	
• (* (*) • F V (F	VC) VC) orced Expiratory Jolume in 1 sec FEV1)		Short Form-36

The correlation between eight SF-36 domains and pulmonary function (VC, and FEV1) were analyzed using Pearson's correlation coefficient.







# Conclusions

Patients with MPM who completed P/D have decreased pulmonary function and HRQOL. Physicians, nurses, and rehabilitation staff should note these findings, which may provide insight into the development of customized rehabilitation strategies for patients with MPM who undergo P/D.



20

-0.50

-1.00

 $\Delta$  FEV1

-200.00

-40

-60

-80

0.50

<u>r =.445</u> p < 0.05





