

# Outcomes of Chronic Subdural Hematoma With Preexisting Comorbidities Causing Disturbed Consciousness

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## Introduction

Chronic subdural hematoma (CSDH) is widely treated by drainage through burr hole opening. However, whether and how preexisting comorbidities causing consciousness disturbance affect patient outcomes remains unclear.

## Methods

Patients: Operated in 2010 to 2012 in our Hp. 188 CSDH pts followed for 90 days among consecutive 220 pts. Retrospective analyses of relationships between comorbidities and mRS at 90 days, postoperative morbidity, mortality, recurrence rate

### Comorbidities causing consciousness disturbance

Definition: known GCS < 15 before presentation of CSDH

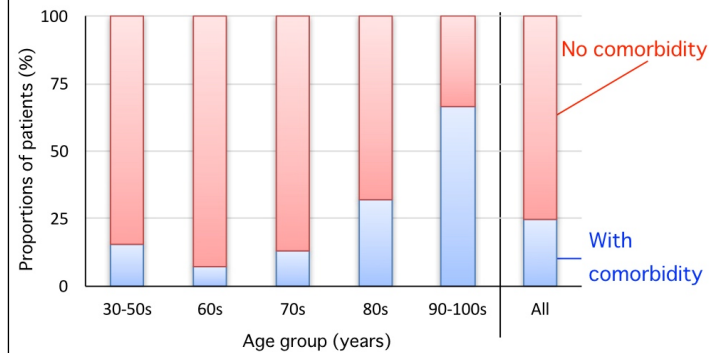
Dementia	30	Clinical Dementia Rating
Alzheimer's	24*	1.3 ± 0.5
Vascular	4	*2 its had 2 types
Levy body	4	
Ischemic stroke	10	mRS 2.6 ± 1.1
Psychiatric disorder	3	
Schizophrenia	1	
Depression	2	
Others	3	

### Baseline characteristics

With comorbidity No comorbidity p value (t test)

Pt number	46 (24%)	142 (76%)	
Pt age	83.6 ± 10.1	74.8 ± 11.2	< 0.001
Female	17 (37%)	39 (27%)	0.25
Bilateral CSDH	6 (13%)	15 (11%)	0.66
Preop. GCS	12.6 ± 2.0	14.5 ± 1.7	< 0.001
Preop. mRS	3.1 ± 1.0	1.9 ± 1.1	< 0.001

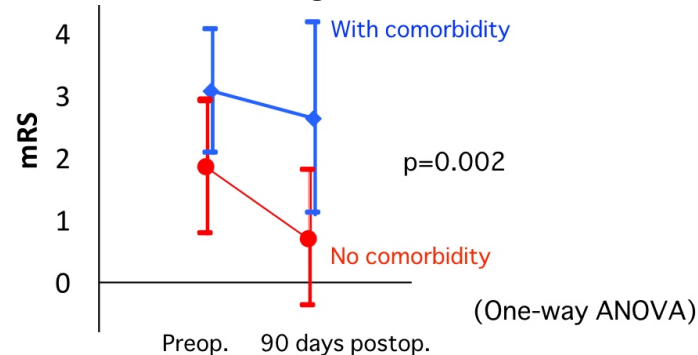
### Proportions of comorbidity



Proportions of comorbidity increased with age

## Results

### Changes of mRS



Poorer mRS improvement with comorbidity

### 90 day outcome

With comorbidity No comorbidity p value

mRS	2.6 ± 1.5	0.7 ± 1.1	< 0.001
Poor outcome* 24 (52%)	12 (8%)	< 0.001	
Morbidity	7 (15%)	2 (1%)	< 0.01
Mortality	5 (11%)	2 (1%)	< 0.01
Reop.	5 (11%)	171 (12%)	0.84

\*mRS > 2

(Logistic regression,  $\chi^2$  test)

### Outcome factors

(Logistic regression analyses)

Factors	Univariate p value	Multivariate p value
Age	< 0.001	0.011
Sex	0.27	-
Bilateral CSDH	0.99	-
Preop. GCS	< 0.001	0.29
Preop. mRS	< 0.001	0.02
Comorbidities	< 0.001	0.03

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CLINICAL ARTICLE

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## Discussion

1. Comorbidities causing consciousness disturbance (more in the elderly) > Delay in Dx > Poorer outcome
2. Comorbidities might be one of the major reasons of poor outcome in the elderly CSDH
3. Necessity of prevention and treatment of dementia etc. would be suggested
4. No correlation with systemic comorbidities, but classification is quite different (J Am Geriatr Soc 34, 1995)
5. First report on the relationships between comorbidities causing cons. disturbance and CSDH outcome

## Conclusions

1. Preexistence of comorbidities causing consciousness disturbance affected severity and outcomes 90 days after surgical treatment of CSDH
2. Comorbidities were also correlated with aging

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