

What factors affect worsening disability in patients with chronic pain?

Prospective observational study

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Backgrounds

The primary treatment goal of patients experiencing chronic pain has shifted from pain reduction to functional status improvement. Our previous cross-sectional study showed that several factors associated with disability(1). However, the associated factors which related to deterioration of disability in patients with chronic pain remain unknown. We examined the effect of the COVID-19 pandemic on disability in patients with chronic pain and there was no significant change in short-term (2).

Aim of Investigation

we examined the change of disability in patients with chronic pain in long-term and factors which related to worsen disability prospectively.

Methods

The Institutional Review Board of Nara Medical University approved this study (Approval No. 2088, 23 May 2022).

Study design: A single-center, prospective observational study.

Inclusion criteria: Patients with chronic pain aged ≥ 50

Period: from April 2019 to March 2021

Exclusion criteria: Patients who refused answering questionnaires or who had difficulty to answer questionnaires.

Questionnaires:

- 12-item WHODAS (disability)
- NRS (pain intensity)
- anxiety and depression (HADS)
- catastrophic thinking (PCS)
- the presence/absence of exercise habits

“the Worsened group” is defined as the patients whose **WHODAS score increased 9 or more** at one year compared to baseline (3).

Results

Four hundred six completed 1-year follow up.

Among the 406 patients,

35 patients (8.6%) worsened disability

Patients’ baseline characteristics were not significantly different between the groups. Regarding the presence/absence exercise habits at 1 year, there was no significant difference between the groups. (Table1)

Table1. Patients’ baseline characteristics

	The worsened group (n=35)	The not worsened group (n=371)	p value
age	78 [19.5]	71 [14.5]	0.051
female	48.5%	53.9%	0.54
disease duration (month)	1292 [3651]	1578 [2289]	0.32
WHODAS (disability)	12 [12]	12 [14]	0.34
NRS	6 [3]	6 [5]	0.68
EQ5D5L	0.64 [0.26]	0.71 [0.30]	0.052
PCS	34 [15]	30 [17]	0.07
anxiety	7 [3.5]	6 [6]	0.26
depression	8 [4.5]	7 [5]	0.07
presence of exercise habit (baseline)	62.9%	62.8%	0.99
presence of exercise habit (at 1y)	60.0%	68.7%	0.29

Median [IQR]

Cox proportional hazard model showed there is no baseline factor associated with worsening disability. (Table2)

Table2. the results of Cox proportional hazard model

	Hazard ratio	95%CI	p value
disability (WHODAS ≥ 25)	1.33	0.76 - 2.34	0.31
age	1.02	0.99 - 1.04	0.15
male	0.96	0.59 - 1.57	0.87
anxiety (A of HADS ≥ 11)	0.92	0.46 - 1.84	0.81
depression (D of HADS ≥ 11)	0.75	0.38 - 1.50	0.42
NRS	1.10	0.98 - 1.21	0.09
catastrophizer (PCS ≥ 30)	1.06	0.61 - 1.84	0.83
presence of exercise habit	0.99	0.70 - 1.64	0.98

Discussion

- Cross-sectional study (1) showed age, anxiety, depression, severe pain, exercise habits were independently associated with disability. However, these factors were found to be not associated with deterioration of disability.
- Multimodal therapy including medication, nerve block, physical therapy, and psychosocial approach would help people prevent from worsening disability.
- There may be other factors, which were not examined in this study, effect on deterioration of disability.

Conclusion

This longitudinal study revealed that 8.6% of patients worsened their disability despite continuing pain management at our pain center. There is no baseline factor associated with worsening disability.

References

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