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## **Current Status and Unmet needs for Rehabilitation in Korean patients with CRPS**

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### **BACKGROUND and aims**

Complex regional pain syndrome (CRPS) is characterized by debilitating and refractory pain in affected limbs, associated with sensory, motor, autonomic, skin and bone abnormalities. For CRPS patients, rehabilitation aimed at improving limb function and desensitizing pain is important, however, patients cannot receive appropriate rehabilitation consistently although patients want systematic, sufficient rehabilitation treatment. The purpose of this study was to evaluate the current status of severity of pain, degree of depression, and quality of life in patients with CRPS in Korea, and assess both subjective needs and unmet needs for rehabilitation of patients in clinical care.

### **Method**

Thirty-seven patients with CRPS who were diagnosed based on Budapest's criteria were recruited from a single medical center in Korea. As well as demographic and clinical data, structured questionnaires including brief pain inventory (BPI), world health organization disability assessment schedule-Korean II (WHODAS-K II), EuroQoL-5D (EQ-5D) for measuring quality of life were analyzed.

### **Results**

The average value of BPI and WHODAS-K II were  $7.88 \pm 1.95$  and  $70.11 \pm 16.63\%$  in overall. EQ-5D index was  $0.356 \pm 0.182$ . Patients' need to get more rehabilitation treatment is high in all domains: Pain 97.3%, Recovery of physical performance(RPP) 86.5%, Fatigue 81.1%, Bodyache 78.4%, Depressive mood 75.7%, Weight management 64.9%, Memory 64.9%, and ADL 58.8% in a decreasing order. For fatigue, weight management, and memory impairment domains, patients stated that they did not receive proper rehabilitation treatment.

### **Conclusions**

In Korea, patients with CRPS are not given adequate rehabilitation treatment for them to feel satisfied by medical care. More structured and individualized rehabilitation treatment to manage each domain related to chronic pain as well as provision of care guidelines are needed in comprehensive rehabilitation setting for CRPS.

**Table 1. Characteristic factors of the CRPS patients**

	Value
<b>Age of the questionnaire</b>	38.41 ± 12.22
<b>Age of onset of CRPS (yrs)</b>	35.65 ± 12.57
<b>Gender</b>	
Male	16 (43.2)
Female	21 (56.8)
<b>Marital status</b>	
Married	17 (45.9)
Living without spouse	20 (54.1)
<b>Religion</b>	
With	24 (64.9)
Without religious beliefs	13 (35.1)
<b>Residence</b>	
Metropolitan area	17 (45.9)
City or country	20 (54.1)
<b>Level of education</b>	
Middle school or less	1 (2.7)
High school or more	36 (97.3)
<b>Employment status</b>	
With	3 (8.1)
Without a job	34 (91.9)
<b>Family history</b>	1 (2.7)
<b>Disability judgement</b>	8 (21.6)
<b>Legal action</b>	8 (21.6)
<b>Limbs involved</b>	
Right upper limb	5 (13.5)
Left upper limbs	1 (2.7)
Right lower limb	14 (37.8)
Left lower limbs	17 (45.9)
<b>Severity score of CRPS – Self reported</b>	
Allodynia	33 (89.2)
Temperature	35 (94.6)
Skin color	31 (83.8)
Sweating	32 (86.5)
Edema	33 (89.2)
Trophic changes	24 (64.9)
Motor changes	36 (97.3)
Decreased active ROM	37 (100)

NOTE. Values are expressed as number (%), and age was as mean ± SD.

**Table 2. Pain characteristics and Quality of life**

	Mean (SD)
<b>Pain severity</b>	
Worst pain	8.51 (1.52)
Least pain	4.65 (2.07)
Average pain	6.43 (1.65)
Pain now	5.92 (2.06)
Improvement after therapy(24hrs)	30.81 (20.77) %
<b>Pain interference (BPI)</b>	
Activity	7.69 (2.15)
Mood	7.96 (2.26)
Walk	7.34 (2.98)
Work	8.35 (1.81)
Relate	7.05 (2.97)
Sleep	8.20 (2.82)
Enjoy	8.57 (2.02)
Overall	7.88 (1.95)
<b>EQ-5D index</b>	0.356 (0.182)
<b>WHO-DAS II dimensions (%)</b>	
Overall	70.11 (16.63)
Understanding and communicating	60.54 (19.56)
Getting around	75.35 (21.36)
Self-care	63.19 (19.61)
Getting along with people	64.43 (27.31)
Life activities	79.03 (18.25)
Participation in society	70.11 (16.63)

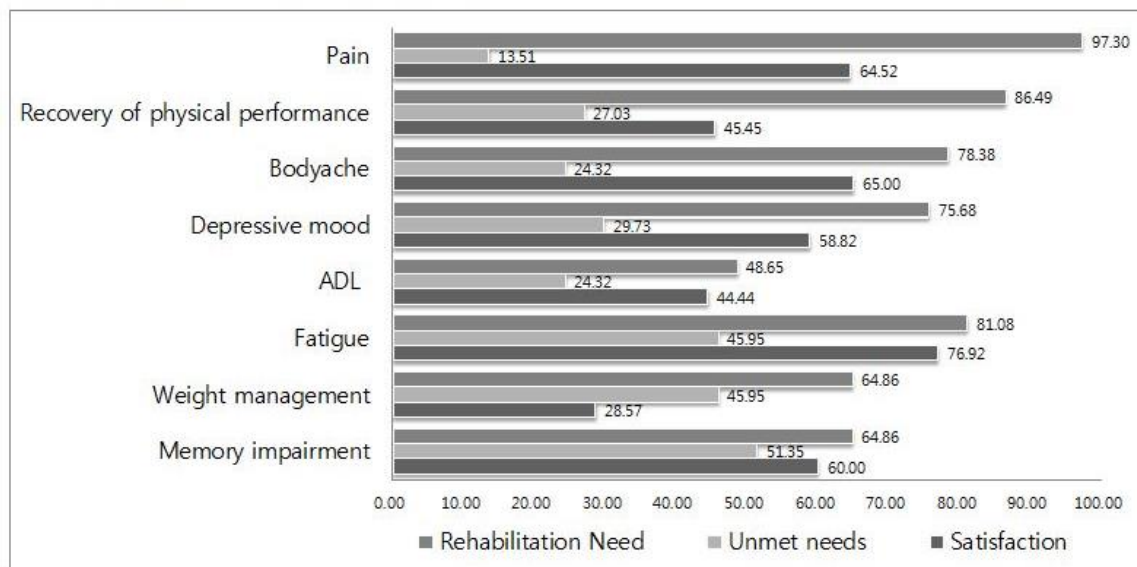


Fig1. Rehabilitation needs, unmet needs and satisfaction