



Comparison of Pain Scales in Systemic Sclerosis (SSc) Patients

Abstract # THU 0276

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Abstract

Rationale

For many SSc patients, pain has been shown to be the single strongest predictor of physical functioning. Patients often mention pain as a symptom but few studies have researched the importance and impact of pain in SSc. Pain in SSc can come from a variety of sources. This study investigates the correlations between several pain scales and between pain scales and other measures of disease severity.

Methods and Patients

100 ambulatory SSc patients, 51 with limited and 49 with diffuse disease, completed the Michigan Hand Questionnaire (MHQ) along with SF36 and SHAQ. 87 (87%) were female. Mean age was 51 y ± 12 and disease duration 7y ± 7. Patients completed several questionnaires each containing a pain scale: SF-36, SHAQ-DI, and MHQ. Also assessed were Modified Rodnan Skin Score and an overall measure of disease severity by physician (VAS).

Results

(See table)

Conclusions

Different pain scales correlated well having moderate to high correlations with each other. High correlations were found between SF-36 Pain and MHQ Pain. SF-36 is a more general measure of pain and MHQ Pain is limited to hand related pain. The highest correlation was found between VAS pain and SF-36 Pain in the limited SSc group.

All 3 pain scales had moderate to high correlations with SHAQ-DI and the other VAS scales. The MHQ Pain scale did not correlate with gastro-intestinal and pulmonary VAS in the limited SSc group. This is sensible given that MHQ Pain measures pain related to the hand and the disease characteristics of patients with limited SSc. All pain scales correlated with the SHAQ-DI with the exception of the VAS scale in the diffuse SSc group. The VAS pain scale had very high correlations with other VAS scales for the diffuse SSc group.

The pain scales all correlated with the general VAS (patient assessment of disease severity) while no correlation was found between pain scales and physician assessment of disease severity (exception SF-36 in diffuse SSc group). Only 1 significant correlation was found between skin score and a pain scale, specifically SF-36 pain for the total population.

Introduction

- Pain is the single strongest predictor of physical functioning in SSc (Benrud-Larson et al., 2002)
- SSc patients often mention pain as a symptom (Johnson, Gladman, Schentag, & Lee, 2006) but few studies have researched the importance and impact of pain in SSc
- SSc patients can experience pain from a variety of sources such as digital ulcers, Raynaud's phenomenon, skin and joint complications, and gastroesophageal reflux

Methods

Subjects

- 100 patients with diagnosis of SSc by ACR classification criteria
- Patient characteristics:
 - 51 patients with limited and 49 with diffuse SSc
 - Age: 51 y ± 12
 - Gender: 87 (87%) females
 - Duration of Disease : 7 y ± 7

Instruments

- SHAQ-DI
- SF-36
- Michigan Hand Questionnaire (MHQ)
- Patient/Physician Disease Severity Assessment: 1-item VAS

Example Question MHQ - Pain Scale

IV. The following questions refer to how much **pain** you had in your **right** hand(s)/wrist(s) **during the past week**. (Please circle one answer for each question).

A. The following questions refer to **pain** in your **right** hand/wrist.

- How often did you have pain in your **right** hand(s)/wrist(s)?
 - Always
 - Often
 - Sometimes
 - Rarely
 - Never

If you answered **never** to question IV-A1 above, please skip the following questions and go to the next page.

- Please describe the pain you had in your **right** hand(s)/wrist(s).
 - Very mild
 - Mild
 - Moderate
 - Severe
 - Very severe

	Always	Often	Sometimes	Rarely	Never
3. How often did the pain in your right hand(s)/wrist(s) interfere with your sleep?	1	2	3	4	5
4. How often did the pain in your right hand(s)/wrist(s) interfere with your daily activities (such as eating or bathing)?	1	2	3	4	5
5. How often did the pain in your right hand(s)/wrist(s) make you unhappy?	1	2	3	4	5

Results

Correlations between VAS, SF-36 and MHQ Pain Scales

	VAS Pain			SF-36 Pain			MHQ Pain		
	Combined	Limited	Diffuse	Combined	Limited	Diffuse	Combined	Limited	Diffuse
SHAQ-DI	.396**	.507**	.278	-.596**	-.589**	-.544**	.506**	.612**	.373**
Raynaud VAS	.912**	.554**	.948**	-.377**	-.419**	-.382**	.381**	.577**	.334*
Digital VAS	.471**	.308*	.488**	-.281**	-.208	-.282	.261**	.100	.321*
Gastrointestinal VAS	.898**	.316*	.947**	-.330**	-.299*	-.385**	.240*	.024	.320*
Pulmonary VAS	.865**	.094	.922**	-.291**	.007	-.400**	.196	-.063	.264
General VAS	.935**	.511**	.970**	-.412**	-.447**	-.446**	.360**	.432**	.366*
Pain VAS				-.425**	-.764**	-.392**	.414**	.749**	.374**
SF36-Pain	-.425**	-.764**	-.392**				-.693**	-.689**	-.674**
MHQ Pain	.414**	.749**		-.693**	-.689**	-.674**			
Skin Score	-.024	.223	-.143	-.218*	-.035	-.124	.128	.117	.016
Physician Severity	.088	.151	.024	-.291**	-.112	-.303*	.152	.247	.190

P ≤ 0.01; *P ≤ .05 (2-tailed) **Uncorrected

Conclusions

Pain Scales:

- Moderate to high correlations found between pain scales
- High correlation between SF-36 (general measure of pain) and MHQ Pain (limited to hand related pain)
- Highest correlation between VAS Pain and SF-36 in Limited SSc group
- Pain scales all correlated moderately to high with SHAQ-DI
- VAS Pain correlated very highly with other VAS items in the diffuse SSc group.

Disease Severity:

- Pain Scales all correlated with Patient Assessment of Disease Severity (Overall VAS)
- Pain Scales did not correlate with Physician Assessment of Disease Severity except for 1 correlation found in the diffuse SSc group with SF-36
- Skin Score correlated significantly only with SF-36 in the total sample
- Pain might be underestimated or not included in physician assessment of disease severity. More detailed analyses and studies are needed to assess how pain contributes to patient and physician assessment of severity of disease and how it correlates to other more objective disease severity measures

References

- Benrud-Larson, L. M., Haythornthwaite, J. A., Heinberg, L. J., Boling, C., Reed, J., White, B., Wigley, F.M.. (2002). The impact of pain and symptoms of depression in scleroderma. *Pain*, 95, 267-275.
- Johnson, S. R., Gladman, D. D., Schentag, C. T., & Lee, P. (2006). Quality of Life and Functional Status in Systemic Sclerosis compared to other rheumatic diseases. *The Journal of Rheumatology*, 33(6), 1117-1122.