

Tender Point Count and Pressure Pain Threshold as Predictors of Chronic Widespread Pain and Health Status in a Seven Year Prospective Study

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CONCLUSIONS

Easy attainable anamnestic and clinical findings such as a report of chronic widespread pain and a tender point count above four can be used as prognostic signs in the clinical evaluation of pain and health status in patients with a history of longstanding pain.

OBJECTIVE

To examine the predictive value of tender point count, pressure pain threshold and report of CWP (Chronic Widespread Pain) with regard to persistence or recurrence of CWP seven years later in a selected population of individuals with self-reported CWP.

Also to study how these factors predicted outcome of SF-36 health related quality of life measurements at follow-up.

BACKGROUND

The prevalence of CWP range between 4.2% and 13.3% in a general adult population.(1)

The old ACR-90 fibromyalgia criteria were based on the thesis that widespread allodynia at distinct tender points is discriminative for fibromyalgia.(2)

ACR revised the fibromyalgia criteria in 2010. The new criteria stress the importance of self-reported pain and symptoms well known to be associated with CWP and fibromyalgia.(3)

Pain itself is known to be predictive for developing and maintaining CWP.(4,5)

There is a lack of research on the long term predictive values of tender point counts and pressure pain threshold measurement in individuals suffering from CWP.



METHODS

A cohort of 303 individuals was identified as having CWP in a cross-sectional survey with 3928 participants.

146 individuals underwent clinical examination with palpation of tender points, dolorimeter pressure pain threshold examination and pain grouping.

Seven years later, pain classification and SF-36 quality of life assessments were collected from postal questionnaires.

Sex and age adjusted OR were calculated for each clinical baseline factor separately.

RESULTS

Table 1. Age and sex adjusted OR for CWP and SF-36 health status at seven year follow-up in relation to tender point count, pressure pain threshold and pain group at baseline.

Clinical values 1996	CWP report		SF-36 physical function		SF-36 vitality		SF-36 mental health	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
0-3 Tender Points	1.00		1.00		1.00		1.00	
4-18 Tender Points	3.89 *	(1.67-9.08)	2.63 *	(1.11-6.22)	1.19	(0.55-2.58)	1.41	(0.65-3.06)
Pressure Pain Thresholds ≤ 3,6 kg/cm ²	1.00		1.00		1.00		1.00	
Pressure Pain Thresholds < 3,6 kg/cm ²	5.24 *	(2.17-12.66)	1.95	(0.82-4.66)	2.54 *	(1.12-5.77)	3.20 *	(1.38-7.45)
No CWP baseline	1.00		1.00		1.00		1.00	
CWP baseline	32.42 *	(7.51-139.94)	4.58 *	(1.48-14.15)	3.33 *	(1.21-9.15)	2.10	(0.79-5.60)

* p < 0.05

- There was a significant association between tender point count and CWP report seven years later.
- All subjects fulfilling the ACR-90 fibromyalgia criteria (≥11 tender points) had self-reported CWP and a lower SF-36 vitality score than mean for the population seven years later.
- To fulfill the ACR-90 fibromyalgia criteria of ≥11 tender points was superior to low pressure pain thresholds as well as CWP classification in predicting CWP and low self-estimated SF-36 vitality score at follow-up.
- There was a strong predictive value for still having CWP in persons who one year earlier fulfilled the ACR-90 criteria of CWP by simply fulfilling the ACR-90 diagnosis criteria a second time.

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