

Original Paper

Psychological Aspects of Pain at Patients with Critical Limb Ischemia

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REZUMAT

Aspecte psihologice ale durerii la pacienții cu ischemia critică a membrelor inferioare (ICMI)

Boala arterială periferică reprezintă o afecțiune majoră ce interesează predominant persoanele de vârstă mijlocie și vârstnicii. Ischemia critică a membrelor inferioare (ICMI) este caracterizată prin durere de repaus, invalidantă, predominant nocturnă și ulcerații dureroase. Scopul acestui studiu este de a evidenția diverse aspecte psihologice ale durerii la pacienții cu ICMI.

Metodă: La 46 pacienți cu ICMI (37 bărbați și 9 femei, vârsta medie 58,6 ani) au fost administrate Inventarul multidimensional pentru durere West Haven-Yale (WHYMPI) și Scala de anxietate și depresie Zigmond-Snaith (HADS).

Rezultate: Pacienții au prezentat scoruri ridicate la subscalele „severitatea durerii” și „tulburări afective” și scoruri scăzute la subscalele „controlul asupra vieții” și „angajarea în activități”. S-au înregistrat nivele crescute de anxietate și depresie, ambele corelând negativ cu scorurile de la subscalele „susținere” ($r=-.609$, $p<0,01$, respectiv $r=-.479$, $p<0,05$), „controlul asupra vieții” ($r=-.704$, $p<0,01$, respectiv $r=-.590$, $p<0,01$) și „activitatea generală” ($r=-.803$, $p<0,01$, respectiv $r=-.678$, $p<0,01$). Scorul privind „severitatea durerii” a corelat pozitiv cu scorul subscalei „tulburări afective” ($r=0.547$, $p<0,05$) și cu anxietatea ($r=0.487$, $p<0,01$) și negativ cu „controlul asupra vieții” ($r=-.544$, $p<0,05$) și „angajarea în activități” ($r=-.503$, $p<0,05$).

Discuții: Este important, pe lângă tratamentul medical, să se acorde atenție aspectelor psihologice ale durerii. În plus, abordarea și din perspectivă psihoterapeutică poate fi utilă în îmbunătățirea calității vieții pacienților cu ICMI.

Cuvinte cheie: boală arterială periferică, durere, anxietate, depresie

ABSTRACT

Peripheral arterial disease is one of the major conditions that affect middle and old aged persons. Critical limb ischemia (CLI) is characterized by ischemic rest pain and painful ulceration. The pain is invalidating,

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predominantly nocturnal and needs medical control. Our study aimed to describe psychological aspects of pain at patients with CLI.

Method: 46 patients with CLI (37 men and 9 women, mean age 58,6 years) were administrated West Haven-Yale Multidimensional Pain Inventory (WHYMPI) and Hospital Anxiety and Depression Scale (HADS).

Results: Patients showed high scores at pain severity, affective distress and low scores at life-control and general activity scales. They had high scores for anxiety and depression; both of them negatively correlating with support ($r=-.609$, $p<0.01$, respectively $r=-.479$, $p<0.05$), life-control ($r=-.704$, $p<0.01$, respectively $r=-.590$, $p<0.01$) and general activity ($r=-.803$, $p<0.01$, respectively $r=-.678$, $p<0.01$). Pain severity correlated positively with affective distress ($r=.547$, $p<0.05$) and anxiety ($r=.487$, $p<0.01$) and negatively with life-control ($r = -.544$, $p< 0.05$) and general activity ($r = -.503$, $p<0.05$).

Discussions: Besides the medical treatment is important to pay attention to psychological facets of pain and mood comorbidity. Furthermore, a psychotherapeutic approach may be useful in improving the quality of life of patients with CLI.

Keywords: peripheral arterial disease, pain, anxiety, depression

BACKGROUND

Peripheral arterial disease is one of the major conditions that affect middle and old aged persons. Its prevalence ranges from 3% (for people aged 37- 69 years old) to 20% (for people aged over 70 years old) (1). In advanced stages (III and IV Leriche) the main symptoms are ulcers and pain- at rest, intolerable, nocturnal increased, needing analgesic treatment (inclusive opiates). Critical limb ischemia (CLI) is characterized by chronic ischemic rest pain, ulcers or gangrene attributable to objectively proven arterial occlusive disease (2,3). CLI is considered like a “malignant” disease - due to generalized atherosclerosis these patients are predisposed to various cardiovascular complications (e.g. myocardial infarction, strokes) which can cause death in few years (4).

The patients affected by CLI are patients generally considered difficult cases, destined to repeated approach to the health care services. Physicians have to take in charge not the pathology but to take in charge the patient. For the control of the pain it turns out essential, near the block of the perception of the pain, to act with psychological participation, in order to interfere with the perception of the pain and the meant one of the pain, modify the feelings associated to the pain, modify the behavior induced by pain (5).

As a main complaint, pain is a personal and subjective experience influenced by cultural learning, the meaning of the situation, attention and psychological variables⁶ with various psychosocial implications which can affect the quality of life.

As well, patients with PAD have high rates of anxiety and depressive symptoms (4, 7-10) which are associated with a worse outcome in their revascularized leg (11). Furthermore, having pain at rest was independently associated with mood comorbidity which may contribute to higher levels of perceived pain (12).

The aim of the study was to describe several psychological aspects of pain at patients with CLI and its relationships with anxiety and depression.

METHODS

Participants

There were recruited patients with CLI from the department of vascular surgery considering as inclusion criteria: patients diagnosed with CLI, stages III and IV Leriche, with clinical symptoms as rest pain more than one month, ulcers and gangrene. A number of 46 patients met these criteria: 37 men and 9 women, with mean age 58,6 years (aged between 33 and 76 years old).

Instruments

The design of the study was transversal. It comprised a single administration to each participant of the following questionnaires:

- 1) *West Haven Yale Multidimensional Pain Inventory (WHYMPI) (13)*

It provides a brief and comprehensive assessment of the important components of the chronic pain experience. It is a 52-item inventory which contains

12 scales divided into 3 parts:

- part I: measures the impact of pain on the patients' lives: interference of pain in vocational, social and family functioning, support from others, pain severity, self-control and negative mood;
- part II: assesses patients' perceptions of the degree to which spouses or significant others display solicitous, distracting or negative responses to their pain behaviors and complaints;
- part III: assesses patients' report of the frequency with which they engage in common everyday activities.

The questions are posed in terms of patients' perception of their pain problem and thus it provides indirect information regarding appraisals, beliefs and cognitions¹⁴. Patient's responses to WHYMPI items are made on a 7-point scale. It has been demonstrated to be applicable across a variety of clinical pain conditions and has been used cross culturally.

2) Hospital Anxiety and Depression Scale (HAD-S) (15)

It is a brief self-report questionnaire with 14 items, which assesses anxiety (HAD-A) and depression (HADS-D) as two distinct dimensions in non-psychiatric populations (16). Seven items relate to each dimension, requiring answers on a 4-point scale (e.g., from 0 = "not at all" to 3 = "very often indeed").

It has been used widely in clinical settings where anxiety and depression can co-occur with physical pathology (17). It has demonstrated good internal consistency with Cronbachalpha values ranging from .68 to .93 for HADS-A, and from .67 to .90 for HADS-D (18).

Statistical analyses

The data were analyzed using SPSS 16.0 software. There were computed Pearson's correlations to evaluate relation between components of the chronic pain experience, anxiety and depression.

RESULTS

The findings (table 1) showed that at West Haven Yale inventory PAD patients had high scores at pain severity, interference, affective distress and solicitous responses, and low scores at distracting responses, support, general activity and life-control.

Table 1. Mean scores for WHYMPI scales and HAD scales

	Mean	Std. Dev.
<i>WHYMPI scales</i>		
Interference	4.70	.827
Support	2.40	1.504
Pain severity	4.90	.951
Life-control	2.75	1.118
Affective distress	4.55	1.234
Negative responses	3.90	1.731
Solicitous responses	2.70	1.070
Distracting responses	1.80	1.418
General activity	2.50	1.539
<i>HAD scales</i>		
Anxiety	9.60	3.110
Depression	8.32	4.256

The patients showed high scores for anxiety and depression.

Significant correlations (table 2) were found regarding different aspects of chronic pain experience. Pain severity, which correlated positively with interference ($r = .803$, $p < 0.01$), affective distress ($r = .547$, $p < 0.05$) and anxiety ($r = .487$, $p < 0.01$) and negatively with life-control ($r = -.544$, $p < 0.05$) and general activity ($r = -.503$, $p < 0.05$). Life-control correlated positively with support ($r = .650$, $p < 0.01$), solicitous responses ($r = .451$, $p < .005$), distracting responses ($r = .548$, $p < .005$), general activity ($r = .749$, $p < 0.01$) and negatively with affective distress ($r = -.620$, $p < 0.01$) and negative responses ($r = -.455$, $p < .005$).

Both anxiety and depression negatively correlated with support ($r = -.609$, $p < 0.01$, respectively $r = -.479$, $p < 0.05$), life-control ($r = -.704$, $p < 0.01$, respectively $r = -.590$, $p < 0.01$), distracting responses ($r = -.673$, $p < 0.01$, respectively $r = -.583$, $p < 0.01$) and general activity ($r = -.803$, $p < 0.01$, respectively $r = -.678$, $p < 0.01$).

DISCUSSIONS

The main impact of pain is due to its high severity, which has as consequence interference in patients (professional, social and family) functioning and generates a high level of affective distress and a lack of perceived life-control. All these are amplified by a low social support. The pain generates affective distress, anxiety and depression, which are exaggerated by the fate of the amputation and the waiting for surgery.

The "perceived feed-back" (the responses of

Table 2. Pearson's correlations

	Interference	Support	Pain severity	Life-control	Affective distress	Negative responses	Sollicitous responses	Distracting responses	General activity	Anxiety	Depression
Interference	-	-.148	.803**	-.484*	.387	.129	-.089	-.224	-.372	.286	.328
Support		-	-.287	.650**	-.285	-.848**	.728**	.797**	.648**	-.609**	-.479*
Pain severity			-	-.544*	.547*	.185	-.103	-.437	-.503*	.487**	.451
Life-control				-	-.620**	-.455*	.451*	.548*	.749**	-.704**	-.590**
Affective distress					-	.050	-.149	-.412	-.623**	.766**	.626**
Negative responses						-	-.717**	-.693**	-.543*	.392	.232
Sollicitous responses							-	.503*	.527*	-.293	-.171
Distracting responses								-	.796**	-.673**	-.583**
General activity									-	-.803**	-.678**
Anxiety										-	.918**
Depression											-

others to the patients' communications of pain) consist especially of negative responses, while solicitous and distracting responses are given (and perceived) in a smaller percent of cases. As a large majority of patients is socially disadvantaged, the negative responses may be due not only to their disease, but to their habits (smoking, drinking, promiscuity).

There is a limited participating in common daily activities especially at aged patients with intense pain, depressed ones and without distracting responses from others.

Besides the medical treatment for pain relieving, is important to pay attention to aspects such as psychological facets of pain and mood comorbidity with their negative consequences on medical outcomes and quality of life. In this respect, considering the psychosocial implications of PAD, it will be usefully:

- to provide social support (which is beneficial in the treatment of these patients with various needs along the path of their chronic illness (19).

- a psychotherapeutic approach of these patients (for the in-patients: time-limited, needing clinician psychologist and for out-patients: combining the medical monitoring with counseling/ psychotherapy).

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