Self-perception of quality of life and identification of alexithymia in failed back surgery syndrome patients

Autopercepção da qualidade de vida e identificação da alexitimia em pacientes com síndrome da falha cirúrgica

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ABSTRACT

BACKGROUND AND OBJECTIVES: Failed back surgery syndrome is one of the most frequent nosological entities in a Pain Clinic and is characterized by the persistent maintenance of lumbar and/or lower limbs pain complaints in individuals already submitted to lumbar vertebral surgery. This study aimed at evaluating quality of life and at investigating the presence of alexithymia in a sample of individuals with failed back surgery syndrome, in addition to analyzing correlations between pain intensity and symptoms of anxiety and depression.

METHODS: This is a descriptive, exploratory, comparative, cross-sectional study with quantitative approach in a sample of individuals with failed back surgery syndrome (G1) (n=38) and a group with low back pain without surgical intervention (G2) (n=42) of a Teaching Hospital Pain Clinic. Participants were evaluated by the Brief Pain Inventory and the Toronto Alexithymia scale. Emotional factors, such as anxiety and depression, were evaluated by Beck scales and quality of life by the generic WHOQOL-BREF questionnaire.

RESULTS: There were mean alexithymia, anxiety and depression scores significantly higher for G1 and poorer quality of life in all domains as compared to G2. There were significant correlations between alexithymia and depression (p<0.01) and quality of life (except for the environment domain) and anxiety/depression (p<0.001).

CONCLUSION: Results have highlighted the negative impact of frequently under-diagnosed psychological variables on quality of life. A better understanding of these emotional reactions may promote a more effective participation of health professionals.

Keywords: Alexithymia, Low back pain, Post-laminectomy syndrome, Quality of life, Reoperation.

RESUMO

JUSTIFICATIVA E OBJETIVOS: A síndrome da falha cirúrgica é uma das mais frequentes entidades nosológicas em uma Clinica de Dor e caracteriza-se pela manutenção persistente de queixas álgicas lombares e/ou nos membros inferiores em indivíduos já submetidos a cirurgia vertebral lombar. O objetivo deste estudo foi avaliar a qualidade de vida e investigar a presença de alexitimia em uma amostra de indivíduos com síndrome da falha cirúrgica, e analisar as correlações entre intensidade de dor e presença de sintomas de ansiedade e depressão.

MÉTODOS: Trata-se de um estudo descritivo, exploratório, comparativo, de corte transversal com abordagem quantitativa em uma amostra composta de indivíduos com diagnóstico de síndrome da falha cirúrgica (G1) (n=38) e um grupo com dor lombar e sem intervenção cirúrgica (G2) (n=42) pertencentes a uma Clinica da Dor de um hospital escola. Os participantes foram avaliados pelo Inventario Breve de Dor e a escala de Alexitimia de Toronto. Fatores emocionais como ansiedade e depressão foram avaliados pelas escalas Beck e, a qualidade de vida pelo questionário genérico WHOQOL-BREF.

RESULTADOS: Apontaram escores médios significativamente mais elevados de alexitimia, ansiedade e depressão no G1 e pior qualidade de vida em todos os domínios, se comparado ao G2. Correlações significativas entre alexitimia e depressão (p<0,01) e qualidade de vida (exceto no domínio ambiente) e ansiedade/depressão (p<0,001).

CONCLUSÃO: Os resultados destacam o impacto negativo que as variáveis psicológicas, frequentemente subdiagnosticadas, têm na qualidade vida. A melhor compreensão dessas reações emocionais pode promover uma atuação mais eficaz do profissional de saúde.

Descritores: Alexitimia, Dor lombar, Qualidade de vida, Reoperação, Síndrome pós-laminectomia.

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INTRODUCTION

Post-laminectomy syndrome (PLS), also known as failed back surgery (FBS) includes a heterogeneous group of patients with chronic residual low back pain after surgical spinal treatment[1].

This syndrome refers specifically to pain associated to symptoms not relieved after laminectomy; however, the term is often used to describe poor results after any type of spinal surgery[2].

The high incidence of spinal surgeries failures has encouraged the search for risk factors justifying the result of such surgery in a certain patient. However, literature shows that there are few unequivocal predictors and they explain the relative low proportion of variation of results[3].

In the last decade, many studies have tried to identify risk factors for poor surgical results due to their high incidence, however with focus on biological, demographic and work-related variables[2]. With regard to psychological and sociological factors, studies had several psychometric and practical problems during the choice and use of screening tools[3].

So, few studies[4,5] suggest as strategy the identification of patients with long-lasting symptoms and high level of distress who might benefit from additional psychological treatment before and/or during surgical treatment.

Patients with low social functioning (measured with quality of life tools) have negative prognosis when reoperated[5,6], in addition to major difficulties in expressing their emotions. They report their complaints using terms such as tension, nervousness, pain and irritation[5,7].

Family and social factors should be addressed, thus explaining the diversity of clinical expressions and personal experiences[6]. In addition, PLS cannot be evaluated just by its impact on physical functioning, but rather by its interaction with other personal factors, such as professional activity, beliefs, anxiety, depression and alexithymia[5,7].

Alexithymia is a multidimensional concept referred to cognitive-affective deficit related to the expression of emotions[7]. Some investigators have considered that the alexithymic component would be one psychological correlate in disorders where major symptom is chronic pain[8]. The usefulness of the application of this concept is directly linked to the most adequate therapeutic approach to the patient, since its use may lead to better understanding of patients with multiple somatic complaints which very often confound physicians, leading them to extensive and unnecessary consultations and evaluations[6,8].

So, this study aimed at evaluating quality of life and at investigating difficulties of FBS patients in identifying and describing their feelings (alexithymia)

METHODS

This is a descriptive, exploratory, comparative, cross-sectional study with quantitative approach. A convenience sample of consecutive cases was used. Participated in the study individuals of both genders divided in two groups, selected from a 10-month demand of outpatient services. Group 1 (G1) (n=38) with diagnosis of PLS (mean of 2.2 surgeries) and group 2 (G2) (n=42) with low back pain patients, without any surgical intervention, belonging to a Pain Clinic of a teaching hospital. All with enough cognitive level to understand the questions, who agreed to participate in the study and have signed the Free and Informed Consent Term (FICT). Patients with no clinical follow up in the Pain Clinic of the *Hospital de Base*, with metabolic, inflammatory or oncologic diseases or with radiological segmental instability were excluded.

Evaluations were applied by a previously trained investigator and, given reading difficulties of some participants, questions were read and marked by the interviewer according to participants' answers, to avoid filling or questions interpretation mistakes.

Pain was evaluated by the Brief Pain Inventory (BPI)[9]. This tool has 15 items, subdivided in two parts: the first evaluates pain intensity (8 items) and the second evaluates the interference of pain on life aspects (7 items): walking ability, sleep, work, relationship with other people and enjoying life, in a numerical scale from zero (no pain) to 10 (worst possible pain).

Quality of life (QL) was evaluated by the generic quality of life WHOQOL-BREF questionnaire[10]. This is a tool made up of 26 questions addressing one general domain and four specific domains (physical, psychological, social relations and environment). QL scores in WHOQOL-BREF domains vary from zero to 100, being that the higher the score for each domain, the better the QL.

With regard to difficulties to identify and describe feelings, Toronto Alexithymia Scale (TAS) was applied[11]. This tool measures the level of alexithymia according to four factors: F1 – ability to identify and describe feelings and separate feelings from body sensations; F2 – ability to fantasize or "day dream"; F3 – preference for focusing on external events rather than internal experiences; F4 – ability to communicate feelings to other people. It has 26 items answered on a Likert scale of five points, from totally disagree (1) to totally agree (5). Total scores vary from 26 to 130 and, according to studies carried out with the original version, when above 74 (inclusive) are interpreted as presence of alexithymia, while below 72 (inclusive), lack of alexithymia. And scores between 63 and 73 do not allow for conclusive evaluations. Studies with the original version suggest good internal consistency with alpha coefficients varying from 0.75 to 0.79. Scores within this spectrum were obtained with the Brazilian version[12].

Emotional factors, such as anxiety and depression, were evaluated by the Beck scale. Our study has used the anxiety inventory (BAI)[13] and the depression inventory (BDI)[13]. BAI was proposed to measure common anxiety symptoms. It is made up of 21 items, with answer alternatives varying from nothing, to a little, moderate and severe. Recommended classification is minimum anxiety (0-7), mild (8-15), moderate (16-25) and severe anxiety (26-63). BDI has 21

categories of symptoms and activities with four alternatives each, in decreasing order of depression level. The 21 items refer to sadness, pessimism, feeling of failure, dissatisfaction, punishment, self-aversion, suicide ideas, cry, irritability, social retraction, indecision, changes in self-image, difficulty to work, insomnia, fatigability, loss of appetite and weight, somatic concerns and loss of libido. Total score allows the classification of depression intensity levels, which vary from minimum depression (0-9), to mild (10-16), moderate (17-29) and severe depression (30-63), and there are Brazilian psychometric studies.

This study was approved by the Institution's Ethics and Research Committee under number 2384/2012.

Statistical analysis

Descriptive statistics was used for data analysis, being that initially data exploratory analysis was carried out. Spearman correlation coefficient was applied to establish correlation among relevant variables.

RESULTS

Both groups were mostly made up of females (67%), married (43%) and mean age of 42.3±5.8 years. With regard to socioeconomic classification there has been predominance of the low category (1/2 to 2 minimum wages). More than half were within this socioeconomic level (55.7%). As to current occupation, 47% (n=18) of G1 patients were inactive (health insurance) and in G2 38% were inactive (n=16). Other sociodemographic and clinical data are shown in table 1.

Pain, anxiety, depression and alexithymia evaluation results comparing both groups are shown in table 2. In all evaluated parameters, G1 had high scores in Beck questionnaires and intense pain perception and of its interference with their daily lives. As to QL, lower mean scores in both groups corresponded to physical and psychological domains and are represented in figure 1.

Table 1. Sample socio-demographic and clinical characteristics (mean±standard deviation or percentage number) (n=38)

Variables	Groups	n	Mean±SD	%
Education level (years)	G1	38	7±4.5	
	G2	42	8±3.8	
Pain duration (months)	G1	38	8±6.8	
	G2	42	9±8.7	
Labor situation				
Formal job				10.5(n=4)
Health insurance				47(n=18)
Retired	G1	38		28 (n=11)
Informal job	G2	42		14.5 (n=5)
Formal job				30.9(n=13)
Health insurance				11.9(n=5)
Retired				19.1(n=8)
Informal job				38.1(n=16)

G1 = diagnosis of failed back surgery; G2 = low back pain without surgical intervention.

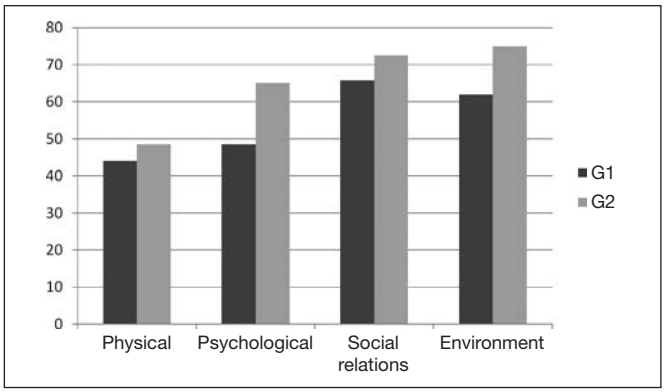

Figure 1. Central trend and scores dispersion of WHOQOL-BREF domains in evaluated patients

G1 = diagnosis of failed back surgery; G2 = low back pain without surgical intervention.

Table 2. Pain, anxiety, depression and alexithymia evaluation scores of evaluated samples

Tools	GI (n=38) Mean ± SD	GII (n=42) Mena ±SD	p value
BPI			
Pain intensity	9.04±2.3	8.50±3.2	0.054
Interference of pain with general activities			
Mood	8.35±3.04	6.48±3.5	0.048*
Walking ability	7.32±2.50	4.50±1.7	0.036*
At sleep	9.35±1.98	5.80±2.8	0.045*
At work	8.50±2.35	5.60±2.5	0.048*
On personal relationships	5.65±3.25	4.75±1.5	0.065
On enjoying life	6.50±3.50	4.50±2.5	0.045*
BDI	24.9±12.6	18.6±5.4	0.045*
BAI	17.8±3.4	8.2±4.6	0.028*
TAS			
F1 (identify feeling)	36.5±7.0	28.5±8.5	0.036*
F2 (fantasize)	10.9±4.0	5.4±3.8	0.045*
F3 (communicate feeling)	14.8±3.2	9.6±5.4	0.038*
F4 (focus on work)	13.2±2.8	10.8±2.5	0.034*
Total	75.4±6.3	60.5±1.2	0.035*

*Significance level – p<0.05; G1 = diagnosis of failed back surgery; G2 = low back pain without surgical intervention. BPI – brief pain inventory; BDI = depression inventory; BAI = anxiety inventory; TAS = Toronto alexithymia scale.

According to mean TAS scores, there has been prevalence of alexithymia (<74) taking into account cutoff scores established by Yoshida[10].

Table 3. Toronto alexithymia scale mean and standard deviation (±) values of evaluated patients

TAS	Mean±SD	Minimum	Maximum
F1	36.5±7.0	19	45
F2	10.9±4.0	6	17
F3	14.8±3.2	11	21
F4	13.2±2.8	9	20
Total	75.4±6.3	59	90

TAS = Toronto Alexithymia scale; F1 = ability to identify and describe feelings and separate feelings from body sensations; F2 = ability to fantasize or "day dream"; F3 = preference for focusing on external events rather than on internal experiences; F4 = ability to communicate feelings to other people.

DISCUSSION

According to our results, there has been surgeries means similar to other studies[14,15]. The sample had also mean age of 42.3 years and high incidence of working incapacity, shown by a majority of individuals under health insurance, confirming the work of Steenstra et al.[16]. With regard to gender, males were majority, in agreement with Teixeira et al.[17]. There has been disagreement with Heyer et al.[18]. In our study, body weight was above anthropometric parameters. Several studies have identified increased weight as major risk factor to worsen pain, before or after surgery[14,16].

With regard to depression, 39.4% of the sample had moderate level. Some studies have shown that depressed individuals with chronic pain have higher incapacity index as compared to those not depressed, and this negatively interferes with QL[18]. Impaired QL in physical and psychological domains is similar to a study by Beigin et al.[19] which shows that such dimensions may predict pain occurrence and expression after surgery. Anxiety, also moderate for most patients of our study, was followed by severe anxiety and, as example of this negative interference, there is amplification of physical symptoms and functional incapacity associated to pain and low adherence to diet or drugs[17,20].

Alexithymia was prevalent in our study. Alexithymic people have literal thinking style, that is, unawareness of their own feelings in stress-generating situations, thus favoring somatization[21,22].

A study by Lane, Sechrest and Riedel[23] has applied TAS-20 to 380 individuals stratified by age, gender, socioeconomic level and education years. It was observed that this tool has a trend to inform worse results for patients with advanced age, male gender, low socioeconomic level and less education years. So, one may conclude that our results have also been affected by the low socioeconomic level and the lower number of education years of the sample.

Saariaho et al.[24] have followed up for eight years chronic pain patients and have investigated the impact of alexithymia and depression. They have observed that alexithymic patients had worse pain and depression both in the beginning and during clinical follow up, relating them to male gender and alexithymia in the beginning of the study, but not to depression. Alexithymia and depression were closely related and this relation was reinforced during the follow up period.

Our results have shown the need for intervention programs developed by multidisciplinary teams to contribute for the emotional processing difficulties and consequently to improve quality of life.

CONCLUSION

In general, failed back surgery has significant impact on patients' quality of life, facilitating the prevalence of alexithymia, depression and anxiety.

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