

CHRONIC DAILY HEADACHE

Stress and impact on the quality of life

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ABSTRACT- Objective: To evaluate the stress presence and its influence in the quality of life of patients with chronic daily headache (CDH). **Method:** A hundred patients with at least 18 years old, with primary headache with duration greater than 4 hours a day, and frequency of 15 or more days monthly for at least three months were studied. Lipp's Inventory of Stress Symptoms and the Medical Outcomes Study Short Form (SF-36) were used. **Results:** Stress was observed in 90% of the patients; nearly half of them was in the phase almost exhaustion. Patients with stress when compared with the ones with no stress presented significantly lower scores in all the domains of SF-36; except in physical functioning. The resistance phase presented scores significantly higher than almost exhaustion; except for bodily pain. **Conclusion:** The majority of the patients presented stress with significant reduction in their quality of life. Consequently, the stress could be related with both the development and the maintenance of CDH.

KEY WORDS: chronic daily headache, stress, quality of life.

Cefaléia crônica diária: estresse e impacto sobre a qualidade de vida

RESUMO- Objetivo: Avaliar a presença de estresse e sua influência na qualidade de vida dos pacientes com cefaléia crônica diária (CCD). **Método:** Foram estudados 100 pacientes com idade mínima de 18 anos, apresentando cefaléia primária com duração maior que 4 horas e frequência de 15 ou mais dias por mês, há pelo menos três meses. Foram aplicados o Inventário de Sintomas de Estresse de Lipp e o Questionário SF-36 de Pesquisa em Saúde (SF-36). **Resultados:** Estresse foi observado em 90% dos pacientes; aproximadamente metade deles estava na fase de quase exaustão. Pacientes com estresse comparados àqueles sem estresse, apresentaram pontuações significativamente menores em todas as escalas do SF-36; exceto em capacidade funcional. A fase de resistência apresentou pontuações significativamente maiores que quase exaustão; exceto para dor corporal. **Conclusão:** A grande maioria dos pacientes apresentou estresse com redução significativa na qualidade de vida. Consequentemente, o estresse poderia estar relacionado tanto no desenvolvimento como na manutenção da CCD.

PALAVRAS-CHAVE: cefaléia crônica diária, estresse, qualidade de vida.

The term chronic daily headache (CDH) comprises a group of headaches that manifests in 15 or more days a month, lasting more than 4 hours, including the headaches associated with the excessive use of medication¹. The prevalence in the general population ranges from 3 to 5%, and women are the most affected^{2,4}. Several factors are related with CDH development: abnormal profile of the personality; stress; the excessive use of symptomatic medication; arterial hypertension; the use of contraceptives or estrogen replacement and traumatic life events⁵. Excessive use of medication is considered the main progres-

sion factor for the CDH stage⁶, however, the stress is mentioned as one of the most frequent factors in precipitating and worsening headache episodes^{7,8}. Stress represents the tension sensation, anguish and discomfort that an individual can experiment. Those sensations would be consequence of important emotional events and or physical and mental disorders. Basically, stress development depends on both the interpretation of the triggering factors and the coping strategies. The personality characteristics can also determine the individual's answer to stress⁹. At first, Selye proposed the stress development into three phases:

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alert, resistance and exhaustion. Due to the fact that the resistance phase is very extensive, Lipp et al.¹⁰ proposed a fourth phase of stress development namely the almost exhaustion. Therefore in Lipp's model, the stress could develop in the following way: alert phase, resistance, almost exhaustion and exhaustion.

Headache is a subjective complaint that in its primary form is not detected by specific examinations; moreover, it does not increase the mortality. Impairments associated with headaches were considered less significant than those attributed to the systemic chronic diseases. However, patients with chronic headaches complain about significant well-being impairment with damage in their quality of life¹¹. Most studies have reported the consequences of migraine in the quality of life¹²⁻¹⁷; few reported the quality of life of patients with CDH¹⁸⁻²². When compared to the general population, the patients with CDH present significant reduction in all SF-36 domains²². Besides daily headache, other factors such as depression, anxiety and stress can affect the quality of life of patients with CDH.

The objective of this study was to evaluate the stress presence and its influence in the quality of life of patients with CDH.

METHOD

A hundred patients, both sexes, at least 18 years old were prospectively studied. They were assisted at the headache inpatient unit of Hospital de Base, São José do Rio Preto, SP. The inclusion criterion was the presence of primary headache, with duration greater than 4 hours a day and frequency of 15 or more days monthly for at least three months. The patients were admitted in the study consecutively, after their informed and free consent term on the research objectives. This project was approved by the Committee of Ethics in Research of Medical School, São José do Rio Preto, SP.

The diagnosis of the type or types of the present headaches was made according to The International Classification of Headache Disorders, 2nd Edition²³.

In the selected patients, Lipp's Inventory of Stress Symptoms for Adults (ISSL)²⁴ was applied to observe the presence and the stress level; the Medical Outcomes Study Short Form (SF-36)²⁵, to evaluate the quality of life.

ISSL, a research instrument, validated by Lipp and Guevara in 1994²⁶, is used to evaluate if the patient has stress, in which phase is (alert, resistance, almost exhaustion or exhaustion) and if the symptoms indicate physical or psychological stress.

SF-36, a generic questionnaire, translated and validated for the Portuguese language²⁷ is used to evaluate the quality of life related to health. It has 36 items that include 8 domains: physical functioning, role physical, bodily pain, general health, vitality, social functioning, role emotional and mental health. Each SF-36 domain presents a final score ranging from 0 to 100. Zero indicates the worst life quality related to the health and 100 the best.

Patients with chronic organic diseases were not included in the study. In the statistical analysis, comparisons of two means were performed by the test *t* and medians were compared by Mood's Median Test. The level of significance 0.05 was adopted.

RESULTS

At the first consultation, the patients' mean age was 38.8 years with an 11.7 standard deviation, ranging from 18 to 73 years. Figure 1 shows the distribution according to gender and the patients' age groups with CDH. Women were the majority in this group (87%). The mean duration of CDH was 4.0 years with standard deviation of 5.6 years, varying between three months and 30 years of duration.

Applying the criteria of the second edition of the International Classification of Headaches, 17 different types of diagnosis were necessary to classify all the 100 patients with CDH. Table 1 shows the distribution of the different types of diagnosis obtained.

The stress presence, the stress phase and the type of the predominant symptom (psychological or physical) were observed in the patients through ISSL. Stress was found in 90% of the patients. The distribution of the patients' stress phases is showed in Figure 2. Among those that presented stress, the prevalence of symptoms in 94.5% was psychological; in 3.3% physical, and in 2.2% combined symptoms.

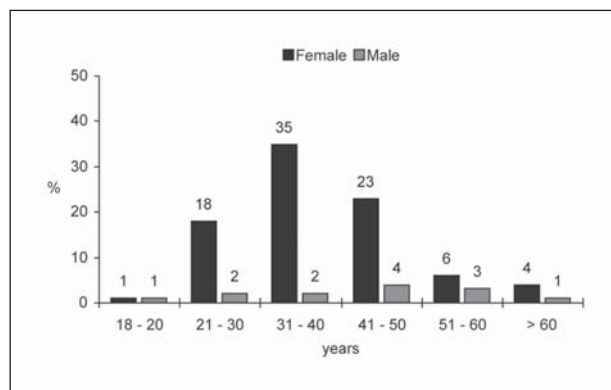


Fig 1. The patients' age and gender.

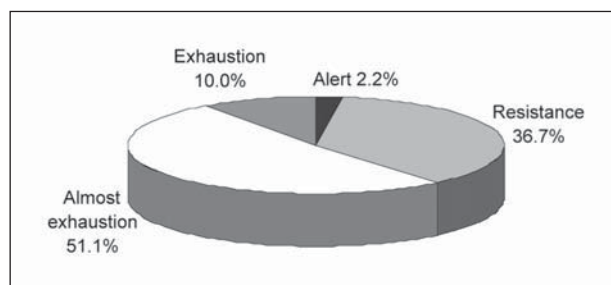


Fig 2. Stress distribution on its four phases.

Table 2 shows the comparison of SF-36 scores among the patients with CDH who presented and did not present stress. The patients with stress presented scores significantly lower in all SF-36 domain (test *t* for two samples), except for the physical functioning domain.

Stress phases were compared with the scores in the eight domains of the SF-36 obtained by the patients. This comparison was made between the resistance, almost exhaustion and exhaustion phases since only two patients were found in the alert phase of stress (Fig 3).

DISCUSSION

Primary chronic headaches as migraine and tension-type headache are frequently associated to the psychological stress^{7,8}. In relation to CDH, Galego et al.²⁸ found the emotional stress as the main precipitating factor (75%) of headache to transformed migraine. Stress is also mentioned as a development factor for CDH⁶.

In our study, stress was observed in 90% of the patients, and the great majority (94.5%) presented the symptoms of psychological stress. This suggests that the anxiety symptoms, tension, distress, insomnia, difficulties with the memory, excessive concern, emotional instability and relaxing difficulties are frequent in patients with CDH.

According to the distribution of stress phases, approximately half (51.1%) of the patients was in the phase of almost exhaustion. In that phase, the patients although presenting some distress and other symptoms, they are still able to work, but with some limitation²⁹.

Comparing SF-36 scores among patients with CDH presenting stress and the ones without stress; except for the domain physical functioning, the first presented scores significantly lower in all the domains. This may indicate the stress negative influence on the quality of life of the patients with CDH.

Table 1. Diagnostic types in CDH.

Diagnosics	Number of patients
M+CTTH	25
M+CTTH+PMOH	21
M+PCM+PMOH	9
M+MA+CTTH	6
PM+CTTH	6
M+MA+CTTH+PMOH	6
MA+CTTH	5
pCTTH+ PMOH	5
CTTH	4
M+CM	3
NDPH	2
PM+CTTH+PMOH	2
M+MA+PCM+PMOH	2
M+MA+ETTH	1
HC	1
M+MA+CM	1
MA+CTTH+PMOH	1

M, migraine; MA, migraine with aura; CM, chronic migraine; PCM, probable chronic migraine; PM, probable migraine; pCTTH, probable chronic tension-type headache; PMOH, probable medication overuse headache; CTTH, chronic tension-type headache; ETTH, episodic tension-type headache; NDPH, new daily persistent headache; HC, hemicrania continua.

We also compared the stress phases with the scores obtained by the patients in each of the SF-36 domains. Except for the bodily pain domain, the patients have presented scores significantly higher in the resistance phase than those in the phase of almost exhaustion. However, the patients in the exhaustion phase, except for role physical, have not presented significant differences comparing with those in the resistance phase.

Compared to the resistance phase, the patients in the exhaustion phase should also present an inferior quality of life, this is what is expected. Due to its own definition, in exhaustion phase there is a lack of resistance with psychological and physical exhaustion

Table 2. Comparative analysis between stress and quality of life.

Domain	Stress		No stress		p-value
	Mean	Sd	Mean	Sd	
Physical functioning	58.3	25.6	66.5	19.2	0.24
Role physical	20.3	27.8	55.0	36.9	0.008
Bodily pain	31.6	18.9	44.7	20.0	0.038
General health	51.2	26.6	75.8	11.4	0.0005
Vitality	36.8	24.8	64.5	20.5	0.001
Social functioning	39.4	24.9	63.8	28.5	0.014
Role emotional	40.0	40.0	76.6	35.3	0.006
Mental health	37.2	23.8	63.2	20.0	0.001

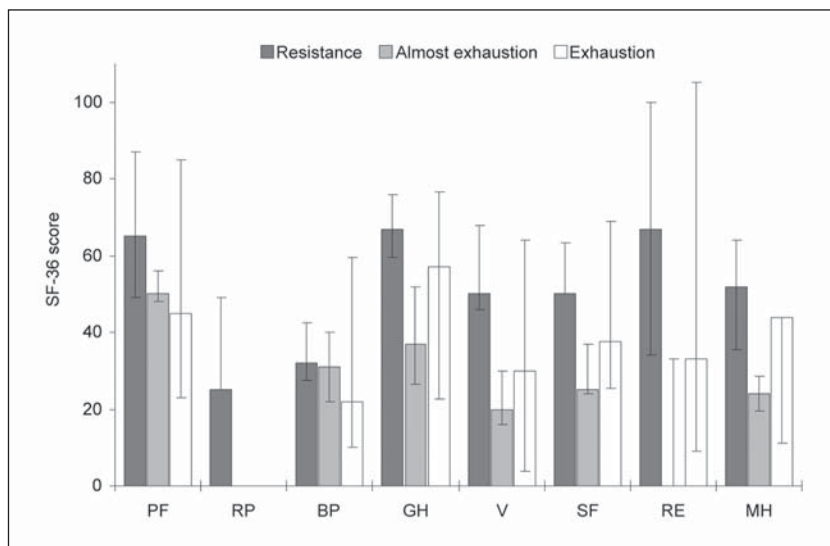


Fig 3. Comparison of the stress phases (medians and 95% confidence intervals) with SF-36 domains scores. PF, physical functioning; RP, role physical; BP, bodily pain; GH, general health; V, vitality; SF, social functioning; RE, role emotional; MH, mental health.

and, consequently, some diseases can appear²⁹. In this phase, the individual may become anergic with no satisfactorily answer to negative or positive environmental stimuli. This may suggest that in the exhaustion phase of the stress, the SF-36 questionnaire could be less sensitive in measuring the life quality with fewer reliable results.

In our study the great majority of patients presented stress with significant reduction in their quality of life. Consequently, the stress could be considered as a factor either in the development and maintenance of daily or almost daily headaches. Therefore, identifying the presence and the stress level of patients with CDH can provide important information for the therapeutic approaches.

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