Arq Neuropsiquiatr 2004;62(3-B):769-773

EFFECT OF EPISODIC TENSION-TYPE HEADACHE ON THE HEALTH-RELATED QUALITY OF LIFE IN EMPLOYEES OF A BRAZILIAN PUBLIC HOSPITAL

Hilton Mariano Silva Jr[1], Roberta P. Garbelini[2], Simone O. Teixeira[3], Carlos A. Bordini[4], José G. Speciali[5]

ABSTRACT - *Objective:* To evaluate the impact of ETTH on HRQoL in a sample of employees of a Brazilian public hospital. *Method:* Three hundred and sixty Mário Gatti Hospital employees were asked about headache occurrence in the previous 6 months and completed a SF-36 and a pain questionnaires concerning impact of pain (0 to 10 scale) on daily activities, work efficiency, leisure and social activities in previous six months. Two groups were studied: 1. Episodic Tension-type headache group: 127 employees - 81 (63.8%) female and 46 (36.2%), male. 2. Control group: 124, 71 (57.3%) female and 53 (42.7%) male. *Results:* ETTH had lowers scores than control in all domains of SF-36; in vitality and bodily pain the difference was statistically significant. *Conclusion:* Our results indicate that ETTH suffers have impact on HRQoL predominantly in vitality. Psychological factors associated to pain may explain this finding.

KEY WORDS: ETTH, headache, HRQoL, SF-36, TTH.

Efeito da cefaléia do tipo tensional episódica na qualidade de vida relacionada à saúde em funcionários de um hospital público brasileiro

RESUMO - *Objetivo:* Avaliar o Impacto de CTTE na QVRS em funcionários de um hospital brasileiro. *Método:* Trezentos e sessenta empregados do Hospital Mário Gatti, foram entrevistados. O questionário para avaliação da QVRS SF-36 foi aplicado e a ocorrência de cefaléia nos últimos seis meses foi avaliada. O impacto da dor nas atividades diárias, de lazer, sociais e eficiência no trabalho foi estimado(escala de zero a dez). *Resultados:* Foram estudados dois grupos: 1. Cefaléia do tipo tensional episódica: 127 empregados - 81 (63,8%) mulheres e 46 (36,2%), homens. 2. Grupo Controle: 124 funcionários, 71 (57,3%) mulheres e 53 (42,7%) homens. As médias do grupo CTTE foram menores que as do grupo controle nos oito aspectos avaliados pelo SF-36. Nos aspectos vitalidade e dor a diferença foi estatisticamente significativa. *Conclusão:* os indivíduos com CTTE apresentaram pior QVRS, predominantemente no aspecto vitalidade. É possível que fatores psicológicos associados à dor possam explicar este achado.

PALAVRAS-CHAVE: cefaléia, cefaléia tensional, QVRS, SF-36.

According to large-scale population surveys episodic tension-type headache (ETTH) is the most prevalent type of headache. Nevertheless, little has been published about the burden or effect of ETTH on health- related quality of life (HRQoL)[1-9]. Most of the research assessing the effect of headaches on the HRQoL has been limited to migraine, indeed. Migraine has been associated with significant economic, social and individual burden[10 -15].

There are few studies of HRQoL in chronic daily headache (CDH) patients in general population[16] or even in specialized headache clinics[17]. Even though the majority of the population suffers from ETTH, information about the impact on HRQoL of those patients is scant.

The present study is aimed to evaluate the impact of ETTH on the health- related quality of life in a sample of employees of a Brazilian public hospital.

METHOD

From March to April 2000, 400 employees randomly selected from those working at the Municipal Hospital Mário Gatti, in the city of Campinas, Brazil, were interviewed. This study was approved by the Hospital Ethics Committee.

Department of Neurology, São Paulo University, School of Medicine at Ribeirão Preto, Ribeirão Preto SP, Brazil: [1]MD, Post graduate student; [2]Psychologist; [3]MD; [4]PHD; [5]Associate Professor of Neurology.

Received 10 December 2003, received in final form 4 May 2004. Accepted 7 June 2004.

Dr. José G. Speciali - Faculdade de Medicina de Ribeirão Preto, Departamento de Neurologia - Av. Bandeirantes 3900 - 14049-900 Ribeirão Preto SP - Brasil. E-mail: hiltonmariano@uol.com.br

After providing informed consent, individuals attended to an evaluation session whose they completed the validated Portuguese version of the "Medical Outcomes Study Short Form- SF-36"[18]. Out of the 400 selected employees, 23 (5.8%) were excluded because they were on vacation; 5 (1.25%) because of removal from their work activities due to health problems and 7(1.75%), with the diagnosis of chronic diseases that could impair the HRQoL. Five employees (1.25%) refused to participate in the study. Soon after, the 360 remaining employees were asked about headache occurrence in the previous 6 months (classified in agreement with the criteria of 1988 of the International Headache Society)[19]. One hundred and nine employees were excluded from the study since they were diagnosed as suffering from others (non-tensional) headache conditions.

The 251 remaining employees were divided into two study groups:

1. Episodic Tension-type headache group (n = 127, 81 (63.8%) females and 46 (36.2%) males. The group mean age was 36.4 years with a standard deviation of 8.52.

2. Control group (without headache complaint): there were 124 individuals, 71 (57.3%) females and 53 (42.7%) males, with the mean age of 37.8 and a standard deviation of 10.2.

There is no statistically significant difference between ETTH and control concerning female distribution.

The pain intensity was assessed on a 10 - point scale where 1 to 3 is defined as "mild", 4 to 7 as "moderate" and 8 to 10 as "severe". The degree of disability was assessed by a questionnaire concerning the impact of pain (from 0 to 10 scale) on daily activities, work efficiency, leisure and social activities in the previous six months. The impact was ranked as follows: minimal/ no impact (0 to 2 score), mild (3 to 5 score), moderate (6 to 8 score) and severe (9 to 10 score).

RESULTS

Headache frequency and intensity - As for ETTH, in 54(42.5 %) individuals attacks used to occur up to once a month; 31 (30. 7%) from 1 to 3 attacks per month; 19 (15%), from 4 to 7 episodes per month; and 15 (11.8%) from 8 to 13 episodes per month.

Concerning pain intensity, 42 (33%) experienced only mild attacks, 71 (56%) experienced moderate attacks and 14 (11 %), severe attacks.

Disability - Impact of ETTH on daily activities in the previous six months - Sixty-two (49%) employees quantified the impact of the pain in the daily activities between 0 and 2; 45 employees (35%) between 3 and 5; 17 (14%), between 6 and 8. Only three employees (2%) reported an important impact (between 9 and 10), (Fig 1).

Impact of ETTH on leisure, social and family activities in the previous six months - Sixty-six employees (52%) quantified the impact of pain in leisure activities, social and family between 0 and 2; 36 employees (28%), between 3 and 5; 19 (15%), between 6 and 8.Six employees (5%), between 9 and 10 (Fig 2).

Impact of ETTH on work efficiency in the previous six months - Seventy-two employees (57%) quantified the impact of pain on work efficiency between 0 and 2; 36 employees (28%), between 3 and 5; 14 (11%), between 6 and 8; and 5 employees (4%), between 9 and 10 (Fig 3).

SF-36 scores - Using the Mann - Whitney test for definition of the variables with statistically significant differences, the eight domains by SF-36 were compared between the episodic tension-type headache group and the control (Fig 4).

In the parameters of general health (p = 0.063), mental health (p = 0.114), role physical (p = 0.805),

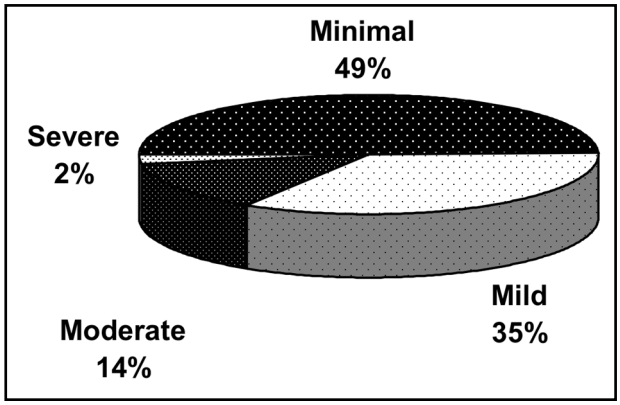

Fig 1. Distribution of the employees according to level of impact of ETTH on daily activities.

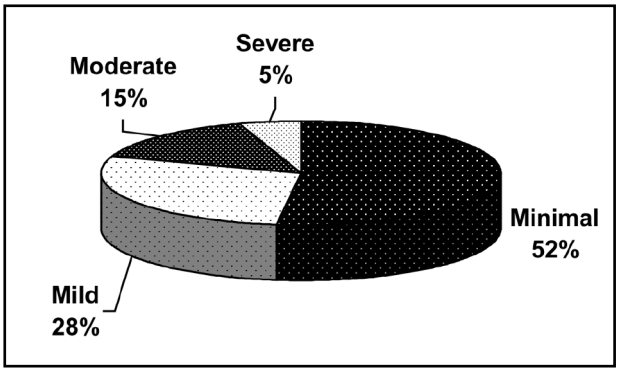

Fig 2. Distribution of the employees according to level of impact of ETTH on leisure, social and family activities in the previous six months.

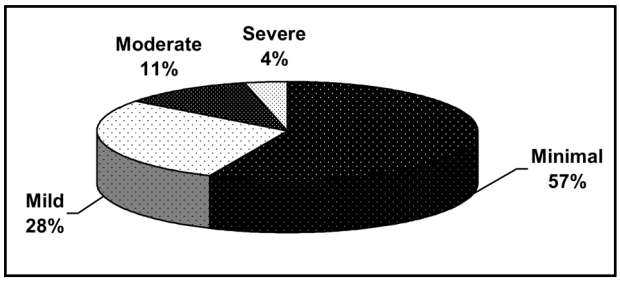

Fig 3. Distribution of the employees according to level of impact of ETTH on work efficiency in the previous six months.

social function (p = 0.20), physical function (p = 0.131), and role emotional (p = 0.221) the groups did not present statistically significant differences.

In the domain of vitality (p < 0.0113) and bodily pain (p < 0.05) the values obtained by the Episodic Tension-type headache group were significantly smaller than control.

DISCUSSION

In spite of being is the most common headache disorder, literature concerning the burden of tension-type headache on health - related quality of life is very limited. Prior to 1988, the lack of a proper classification system was the main reason to this fact. By that time, no precise and operational definition of tension-type headache was available and several imprecise terms were used. The terms muscle contraction headache, tension headache, psychogenic headache, psychomiogenic headache, essential and stress headache had been used interchangeably[2]. In the 1988 International Headache Classification[19] the tension-type headache (TTH) has been precisely defined and classified in two forms, the Episodic Tension-Type headache (ETTH) and the Chronic Tension- Type headache (CTTH). Some clinical features also contribute to the absence of studies of the effect of ETTH on the HRQoL: the pain is usually mild to moderate in severity, the pain has no prodome or aura and the associated features of migraine, such vomiting, are absent. Besides, ETTH does not usually interfere with daily activities and physical activity normally has no influence on headache intensity[1]. On the other hand, migraine, which is associated to a great economic and individual burden, is more often seen in clinical settings. Migraine has, understandably, occupied the attention of most investigators.

With respect to frequency of pain, Rasmussen et al.[1] reported that 23 % of tension-type headache patients experienced from 8 to14 days per year with pain and 36 % experienced several attacks per month. Lavados and Tenhamm[3] observed that 32.7% of the women and 42.2% of the men with ETTH experienced from 2 to 4 episodes per month. Schwartz et al.[4] found that 71.8% of the ETTH suffers experienced 30 or fewer episodes per year. In Brazil, Vincent et al.[20] found an average frequency of 2.7 episodes of ETTH per month and Bigal[9] reported that 57.4% of the sample of university students suffer from ETTH experienced from 1 to 5 days with pain a month. So, our results are quite similar to previous publications.

In this study, the impact of ETTH on work efficiency was assessed on a 0 to 10 scale and 57% of

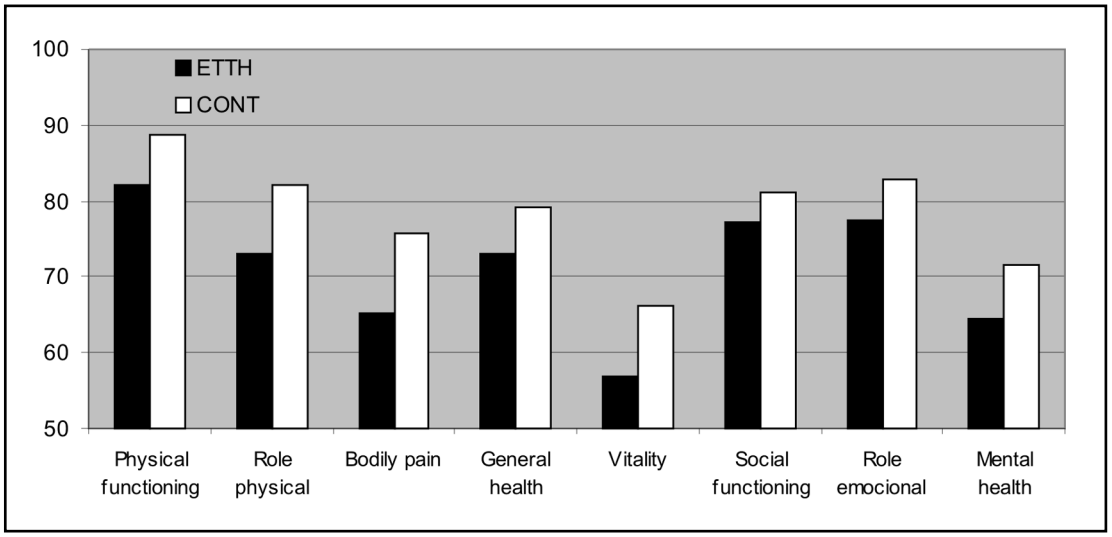

Fig 4. Comparison of SF-36 scores between ETTH group and control.

our study subjects reported minimal interference. In the same way, Schwartz et al.[4] observed that only 8.3% of the ETTH suffers reported lost workdays due to their headaches and Pryse-Phillips et al.[5], in Canada, reported that only 8% of TTH suffers experienced time off paid work because of headache. Lavados and Tenhamm[3] reported that 86.9% of the subjects with ETTH frequently experience pain during the work, although 52.3% reported that never or rarely missing work due the pain.

As for the impact of ETTH on leisure, social and family activities, the Canadian study[5] showed that 18% of the TTH suffers canceled family activities and 26% canceled social activities because of pain. Lavados and Tenhamm[3] reported that 74.3% of the individuals with ETTH frequently experienced pain during social or family activities, although 48.8% reported that never or rarely lost such activities because of pain.

Recently, HRQoL measures have been recognized as providing additional data about the impact of several chronic diseases[21] and the SF-36 is the most widely used generic instrument for measuring HRQoL. The instrument is translated into numerous languages, and the validity of the eight subscales is confirmed in general populations and in a wide variety of patient groups in more than two thousands articles. Our sample experienced a significant impact on the domain vitality of the SF-36. The analysis of this aspect is based on the amount of time in the previous four weeks in which the individual felt full of energy in contrast with the periods of fatigue or exhaustion. This parameter seemingly is extremely affected by the headache[12,15,17] and other pain syndromes, such as chronic low back pain[22]. Osterhaus et al.[12] reported that the score obtained by the migraineurs in vitality was not only smaller than obtained by the depressed individuals. Wang et al.[23] studied 901 patients of a headache clinic in Taiwan and noted that the vitality domain was highly correlated with symptoms of anxiety and depression evaluated by the Hospital Anxiety and Depression Scale. Holroyd et al.[24] reported that chronic tension-type headache suffers were 3 to 15 times more likely than matched controls to receive a diagnosis of an anxiety or mood disorder with almost half of the patients exhibiting clinically significant levels of anxiety or depression. Solomon et al.[25] observed a significantly higher percentage of tension-type headache patents with poor health associated with mental health than patients with migraine. Among Brazilian patients with ETTH, symptoms of anxiety and depression were observed in 60% and 32%, respectively[26]. Serrano-Duenas[27] studied 89 patients with chronic TTH and compared their level of depression (on the Hamilton scale) with 31 patients with migraine with typical aura and a control group of 34 asymptomatic volunteers, matched for age, marital and job status. The author observed a similar level of depression between the TTH group (33.7%) and migraine group (32.2%).

In order to study the relationship between primary headache syndromes and mood disorders, Mitsikostas and Thomas[28] studied 470 headache outpatients and 150 age - and sex-matched healthy subjects using a specific questionnaire that included the Hamilton rating scales for anxiety and depression. These authors reported that the average scores for anxiety and depression were significantly higher in headache sufferers than in healthy people.

In this study, we examined the impact of ETTH in individuals' lives and on HRQoL in a sample of employees of a Brazilian public hospital. Even though our sample is not being a general population-based one, the clinical features and disability patterns reported herein are quite similar to previous published data. Our study showed that in a sample of ETTH sufferers, pain has reduced HRQoL scores in the domain of vitality compared with controls. It is possible that pain cause an affective distress that could lead to "decreased vitality". For sure, additional work is required to assess the clinical utility of HRQoL and disability assessment in a large population of ETTH suffers.

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