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Headache and mood disorders

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Abstract The aim of the study was to estimate the occurrence of mood, anxiety and disability disorders in 300 patients affected by chronic daily headache and MOH, who were observed for a 16-month period in our centre. We monitored the patients on an interview basis, concerning the anamnestic data collection related to the pre-morbid period, information given by relatives regarding the patient's behaviour during the day, attitudes towards others, maintenance of previous interests and enjoyments, and modifications of the biological rhythm. Several tests were conducted, underlining a significant correlation between headache and mood disorders, impairment of working activity, social and family life. The study shows that patients affected by chronic daily headache and MOH present high levels of anxiety, a depressive symptomatology associated with alexithymia. Moreover, it has been discovered that anxiety and depression facilitate the onset of headache, while patients suffering from pain persistence were more vulnerable to psychiatric problems. In consideration of these results, more exhaustive evaluations relating to the psychopathological aspects in patients affected by headache are necessary.

Key words Chronic daily headache • Depression • Psychological distress • Quality of life • Psychological test

Introduction

The experience of pain represents not just a sensorial process, but a complex perception involving the superior levels of the central nervous system, emotional states and higher mental processes. Besides an analgesic therapy, a global approach to pain treatment also considers, in the majority of chronic pain patients, the intercurrent situational and emotional pathogenetic elements towards a multilateral intervention model.

In this study, we aimed to evaluate the occurrence of mood, anxiety and disability disorders in 300 patients affected by chronic daily headache and MOH, who were observed for a 16-month period in our centre.

This symptomatology necessarily recalls the correlation between somatic and psychic aspects, mind and body, medicine and psychiatry. The acknowledged comorbidity concerning pain and mood disorders should entail the association of an antalgic therapy with an adequate treatment against depression and anxiety. Epidemiological research showed that mood disorders occurred in a great number of patients affected by headache [1].

A multicenter Italian study focused attention on the high comorbidity level between mood disorders and tension-type headache, determining a psychiatric comorbidity of 85% [2].

Several papers have dealt with the relationship between pain and depression in order to establish if depressive symptoms precede or follow chronic pain [3]. These studies propose three hypotheses:

1. Depression induces chronic pain by incrementing the sensibility to the pain itself and reducing the tolerance limit [4].
2. Depression is a psychological reaction to chronic pain, determining a disabling physical condition and a reduction in both social and physical activities [5].
3. Pain and depression underlie common pathogenetic mechanisms, both psychological and biological, represented by the role of biogenic amines (serotonin and noradrenaline) [6].

In our study, we monitored the patients on an interview base, concerning the anamnestic data collection related to the pre-morbid period, information given by relatives regarding the patient's behaviour during the day, attitudes toward others, maintenance of previous interests and gratifications, and modifications of the biological rhythm. Our aim was to evaluate the interdependence between headache and humoral disorders.

Materials and methods

A total of 300 patients, (100 males, 200 females, M:F 1:2; aged 25–50 years, mean age 36.44 years), diagnosed with chronic daily headache and MOH, were enrolled in the study. The average duration of illness was 15 years. Exclusion criteria were: acute and disabling concomitant psychiatric pathologies, either functional or diagnosed on axis III of DSM-IV, treatment with antidepressants, benzodiazepines, and antiepileptics [7].

The patients were observed for 16 months in our Regional Referral Headache Centre and underwent several trials with evaluation measures such as Sheehan Clinician Rated Anxiety Scale (SCRAS), Social Adaptation Self-evaluation scale (SAS), HAMILTON-D, and Disability Scale (DISS).

SCRAS was administered to evaluate in general the severity of anxiety symptoms and of both panic and phobic disorders. The trial was composed of 35 items, which explore subjective symptoms that appeared during, or in consequence of, critical anxiety episodes during the previous week [8].

SAS contains items expressing positive aspects, such as level of cooperation, happiness, sense of humour, sense of responsibility, etc. [9].

The Hamilton-D scale, composed of 21 items, is particularly adequate for measuring depressive symptomatology in adult patients. The first 17 items are generally considered key for depression and define the cut-off of severity, which can be schematized: >25, severe depression; 18–24, moderate depression; 8–17, mild depression; <7, absence of depression [9].

DISS measures the impairment rank of working activities (item 1), social life (item 2), family life (item 3), stress perceived by the patient (4), and social support received (5). This scale proved to be reactive in recognizing different types of active treatments [10].

Results

Of the sample (Table 1), 200 patients (45 men and 155 women) had a Hamilton-D score that varied from 12 to >25, particularly with respect to the first 17 items regarding depression. The items with highest results were those representing anxiety and somatisation disorders (10 "psychic anxiety", 11 "somatic anxiety", 12 "gastrointestinal somatic symptoms", 13 "general somatic symptoms", 15 "hypochondriasis", 17 "insight"), cognitive disorders (2 "guilt feelings", 9 "agitation", 21 "obsessive compulsive symptoms") and slowdown (1 "depressed mood", 7 "work and interests", 8 "slowdown", 14 "genital symptoms").

Of particular significance are the results relating to item 3, "suicide", where 42 patients (21%) gave the following answers: (1) I think that life is not worth living (42.85%); (2) I wish I was dead or I have considered the possibility of suicide (42.85%); (3) I have made attempts to commit suicide (14.3%).

This positivity to the Hamilton-D scale is supported by an analogous positivity on the SCRAS scale (Tables 2, 3, 4). In this scale, the first 16 items evaluate panic symp-

Table 1 Hamilton-D score (n=200)

Item	Patients, n	%
Depressed mood	150	75
Feelings of guilt	117	58.5
Suicide	42	21
Early insomnia	126	63
Middle insomnia	96	48
Late insomnia	108	54
Work and activities	120	60
Retardation: psychomotor	75	37.5
Agitation	141	70.5
Psychological anxiety	159	79.5
Somatic anxiety	168	84
Somatic symptoms (gastrointestinal)	48	24
General somatic symptoms	177	88.5
Genital symptoms	75	32.5
Hypochondriasis	84	42
Loss of weight	57	28.5
Insight	51	25.5
Diurnal variation	117	58.5
Depersonalization and derealisation	12	6
Paranoid symptoms	18	9
Obsessional and compulsive symptoms	24	12

Table 2 SCRAS score: items 1–16. Data are expressed as percentage (*n*=200)

Item	Minimal	Moderate	Severe	Extreme
Dizziness	25.5	24.0	1.5	7.5
Weakness in legs	9.0	28.5	6.0	6.0
Unstable balance	15.0	21.0	1.5	3.0
Dyspnoea	19.5	6.0	7.5	1.5
Tachycardia	19.5	18.0	3.0	3.0
Chest pain	9.0	7.5	6.0	1.5
Smothering sensations	12.0	16.5	6.0	1.5
Paraesthesia	7.5	9.0	3.0	
Burst of heat	5.0	27.0	7.5	6.0
Sickness	21.0	24.0	7.5	3.0
Diarrhoea	16.5	9.0	4.5	
Headaches	16.5	33.0	30.0	12.0
Tiredness	28.5	27.0	16.5	10.5
Increased sensitivity to light, sound	22.5	21.0	9.0	12.0
Sweating	16.5	16.5	10.5	3.0
Derealisation	6.0	9.0	1.5	3.0

Table 3 SCRAS score: items 17–20. Data are expressed as percentage (*n*=200)

Item	Minimal	Moderate	Severe	Extreme
Depersonalisation	6.0	9.0	1.5	3.0
Hypochondria	21.0	7.5	3.0	3.0
Fears of going mad	7.5	12.0	3.0	2.0
Danger sensations	18.0	10.5	10.5	1.0

Table 4 SCRAS score: items 21–35. Data are expressed as percentage (*n*=200)

Item	Minimal	Moderate	Severe	Extreme
Shaking or shivering	19.5	10.5	3.0	1.5
Increased depression	24.0	16.5	6.0	3.0
Emotional lability	24.0	16.5	10.5	3.0
Dependence from others	15.0	10.5	6.0	1.5
Compulsive thoughts	3.0	5.0	3.0	
Obsessive thoughts	18.0	15.0	3.0	3.0
Initial insomnia	24.0	10.5	3.0	7.5
Central insomnia	15.5	7.5	3.0	7.5
Phobias	7.5	12.0	1.5	3.0
Irritability	30.0	33.0	12.0	16.5
Anxiety due to job interview	21.0	21.0	3.0	3.0
Panic attacks	10.5	3.0	3.0	3.0
Spontaneous anxiety	13.5	13.5	3.0	3.0
Anticipating anxiety	19.5	13.5	6.0	6.0
Situational panic attacks	12.0	4.5	3.0	4.5

toms, which occurred during the previous week (Table 2), those ranging from 17 to 20 evaluate the presence of spontaneous or situational panic attacks and of anticipated anxiety (Table 3), and the last 15 items evaluate specific symptoms of anxiety (hesitation, obsessiveness, somatisation, etc.) (Table 4).

We also analysed the DISS, a scale for self-evaluation of the level of compromise in the areas of working life and social life. We discovered that in 13% of cases, the patient's symptoms mildly interrupted work or study, 38% moderately interrupted, 39% markedly, and in 8% severely. This data reoccurs in compromising social life and/or leisure activities, where 14% answered mildly, 48% moderately, 17% markedly, and l8% severely. The last statistic highlights a mild compromise in family life for 17% of persons, moderate for 39%, markedly for 22%, and severely for l8%.

Conclusions

From the study it emerges that patients affected by chronic daily headache and MOH present high levels of altered regulation of affectivity, tending to react excessively to minor stresses. Many patients suffer from persistent physical complaints that often require medical or therapeutic interventions, which depend on the release of endogenous hormones in response to stress. Chronic exposure to stress factors leads to significant compromise in the effectiveness of this system, thus resulting in an inferior threshold to various stimulants compared with that of non-chronic patients. Overproduction of catecholamine, which results in a general sensation of anxiety and insomnia, with reduced production of cortisol, is one of the many neurohormonal disorders involved in this conclusion [11].

Further evidence supporting the recognition of mood disorders is the fact that the deflection of mood tone implies an important amplification of the organic symptomatology of the base illness, determining an aggravation of the pain component. Deflection of mood tone interferes with the quality of life, inducing aggravation on a par with other organic variables [12]. These results necessitate more in-depth evaluation of the psychopathological tendencies of all patients who refer to a headache centre.

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