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An integrated approach to cephalalgic patients. Preliminary results on 64 adult patients with migraine without aura

Abstract The importance of the neuropsychological aspect in patients affected by tension headache is highlighted by different data in the literature as well as the results of a multicentric Italian study on comorbidity linked to consistent pathologies, from psychiatric to psychopathologies, in cephalalgic subjects. The need for an integrated approach to the treatment of migraine comes from the assumption, which has recently been confirmed by research, that cephalalgic patients, depending on their emotional condition, have difficulty in dealing with anxiety or other forms of stress in their everyday life. An integrated intervention is extremely useful both in the diagnostic and in the therapeutical approach. For 6 months, 64 patients with migraine without aura were subjected to an integrated therapeutical approach (the median age was 39 years). A number of exclusion criteria were used. The first group comprised 34 patients with migraine without aura having fewer than 4 attacks per month, while the second group comprised 30 patients with migraine without aura having more than four attacks per month. The psychological intervention involved clinical colloquia, such as

Jacobson's muscle relaxation technique as well as tests and clinical questionnaires (follow-up and discussion). The follow-up assessed parameters relative to the attacks: frequency, length, and intensity. The reduction in the frequency and the length of migraine was more evident in the groups undergoing an integrated approach than in the group undergoing pharmacological therapy. This reduction was more significant in the group (8 patients) with more than four episodes per month, whose treatment involved an integrated approach and Jacobson's relaxation technique. The integrated approach yielded better results in patients with higher frequency, length, and elevated intensity of attacks (>4 attacks/month).

Key words Migraine without aura • Tension headache • Integrated approach • PMR Jacobson • Neuropsychology

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The definition of an integrated approach

The importance of the neuropsychological aspect in patients affected by tension headache is highlighted by different data in the literature as well as the results of a multicentric Italian study on comorbidity linked to consistent pathologies, from psychiatric to psychopathologies, in cephalalgic subjects [1]. The need for an integrated approach to the treatment of migraine comes from the assumption, which has been confirmed by research, that cephalalgic patients, depending on their emotional condition, have difficulty in dealing with anxiety or other forms of stress in their everyday life [2]. Our team at the Headache Center of Benevento is made up professionals from both the medical and the psychological field. We considered the integrated approach as the most suitable intervention for these patients, based on organicistic and neuropsychological as well psychological components [3].

The multidisciplinary team attending to cephalalgic patients can have a strong positive impact on the patients, giving them a more efficacious reason to follow the therapy in the medium term [4]. The integrated intervention is extremely useful both in the diagnostic and in the therapeutical phase. Sacks observed that: "If there is something that afflicts the cephalalgic patient apart from migraine it is the fact of not being heard by the doctor, but observed, analyzed, filled with drugs, squeezed, but not considered..." [5].

The characteristics and peculiarities of the clinical-psychological intervention should be noted. The potential presented by neuropsychological anamnesis confirms the positive effect of the global survey and shows how clinical psychology can contribute toward both the study and the therapy of headache by means of various strategies and techniques [6].

In the cephalalgic syndrome, there are psychological and organic aspects that are characterized by modulation. Specialist intervention, as an analysis of the disorder, is articulated and must balance treatment with aspects unique to each individual case. "In order to draw attention on the psychological aspects of the cephalalgic attack, we do not take into consideration the organicistic aspects and then face problems with the integrated perspective" [7, 8].

Introduction

At the Headache Center of the Hospital "G. Rummo" in Benevento we examined various patients, who were affected by different kinds of headache (migraine without aura, chronic tension headache, daily chronic headache), using the integrated approach. We also studied, again based on an integrated approach, a group of cephalalgic patients in the developmental age group (9–11 years old). This review concerns the contribution of the integrated approach to the treatment of migraine with aura in adults [12].

Target of the study

Within a 6-month period we aimed to verify the contribution of the integrated approach to the treatment of migraine without aura in adults, by monitoring the following parameters [13]:

- Frequency of attacks.
- Length of attacks.
- Intensity of attacks.

Methodology

The study of the integrated approach was conducted on 64 patients affected by migraine without aura (IHS criteria) [14] from September 2002 to June 2003. The median age was 39 years (range 25–54 years; 46 women, 18 men).

Exclusion criteria

- Significant neurological pathologies (cerebrovascular disorders, etc.).
- Significant psychiatric and psychological pathologies (affective disorders, behavioral disorder, and schizophrenic disorder).
- Significant internal pathologies, chronic conditions and endocrine pathologies.

Evaluation (time 0)

Medical history: neurological and general examination.

Clinical interview: involving the psychologist, patient, and family; neuropsychological evaluation.

Evaluation at 3 and 6 months (T1 and T2)

Neurological and general objective examination. Conversation: psychologist, patient, family. Neuropsychological evaluation: analysis of the cephalalgia and of the schedule for monitoring daily life and emotional state.

The 64 patients were divided into two groups, according to the frequency of attacks (<4 and >4 attacks per month, according to the flowchart of the SISC guidelines).

Within the second group (>4 episodes/month) we created a subgroup of patients who underwent muscle relaxation according to Jacobson's technique.

Group 1: (34 patients) comprised patients suffering from migraine without aura, with fewer than four attacks per month):

1. 20 Patients: integrated approach and progressive muscle relaxation (PMR) according to Jacobson [15]; symptomatic pharmacological therapy and prophylaxis; psychopathological counseling (clinical conversation, etc.).
2. 14 Patients: control group; symptomatic pharmacological therapy and prophylaxis; monitoring.

Group 2: (30 patients) comprised patients suffering from migraine without aura, with more than four attacks per month):

1. 8 Patients: integrated approach and PMR.
2. 8 Patients: integrated approach without PMR.
 - Symptomatic pharmacological therapy and prophylaxis.
 - Psychopathological counseling (clinical conversation, etc.).
3. 14 Patients: control group; symptomatic pharmacological therapy and prophylaxis; monitoring.

Psychological intervention

- Clinical conversation; muscle relaxation technique of Jacobson (PMR), 16 patients from group 1 and 8 patients from group 2.
- Test and clinical questionnaires (verification and discussion).
- Verification of the parameters related to the attacks: frequency, length, and intensity.

NPS evaluation schedule used

Primary scales

- MMPI (Minnesota Multiphasic Personality Inventory) for clinical efficaciousness of contents [16, 17].
- CBA.2 (Cognitive Behavioral Assessment) [18].
- IBQ (Illness Behaviour Questionnaire; Psychophysics Wellness) [19].

Secondary scales

- MIDAS II (Migraine Disability Assessment Questionnaire) [20].
- Anxiety or depression was assessed with the Anxiety Rating Scale, the Depression Rating Scale of Hamilton [21].
- The Self Control Schedule of Rosenbaum [22] was used as a main indicator of the fundamental ability of self-control.

- The STAI X1-X2 of C.D. Spielberger (evaluation of anxiety and behavior) [18].
- The PM 38 of Raven [23] and the Bender Visual Motor Gestalt Test [24] help to establish the different indicators linked to perception and to intellectual qualities.
- Other clinical questionnaires, which were useful for the research, were also used.

Consideration

“The instruments for evaluation both in psychiatry and in neurology have always represented the scientific method applied to research, because clinical observation can be measured through the main psychopathological characteristics” [17, 18].

We must take into consideration that intelligence, which is a psychological reality, is linked to comorbidity. In fact intelligence tests represent the basis of most epidemiological studies on comorbidity. In order to choose the correct therapeutical approach to headache it is important to identify the comorbidity of other pathologies [19].

In the course of our study, we could not provide a definition of the true personality of the cephalalgic, but we can confirm that there are some common psychological characteristics such as perfectionism, rigidity, competitiveness, anxiousness, ambition, rivalry, overreaction to external factors, and the presence of psychosomatic pathologies [20, 21].

Results

Reduction in the frequency of headache

- A reduction in the frequency of attacks was noted in the groups subjected to the integrated approach as well as in those undergoing pharmacological therapy.
- This reduction was more evident in the groups subjected to an integrated approach than in groups undergoing pharmacological therapy only.
- It was more significant in the group (8 patients) with a frequency of fewer than four attacks per month that was subjected to the integrated approach and to the Jacobson technique.

Reduction in the length of headache

- Reduction in the length of headache was noted in the groups subjected to the integrated approach as well as in those undergoing pharmacological therapy.

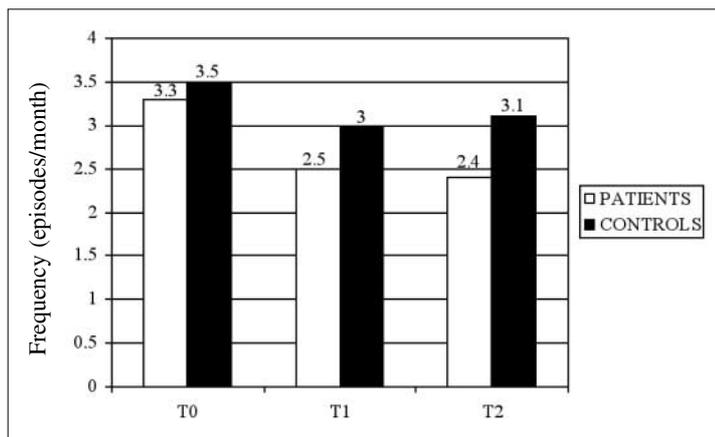


Fig. 1 Frequency of migraine without aura, fewer than four episodes per month

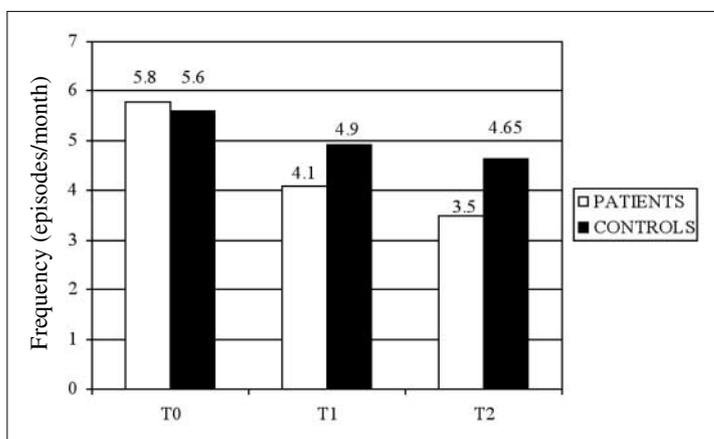


Fig. 2 Frequency of migraine without aura, more than four episodes per month

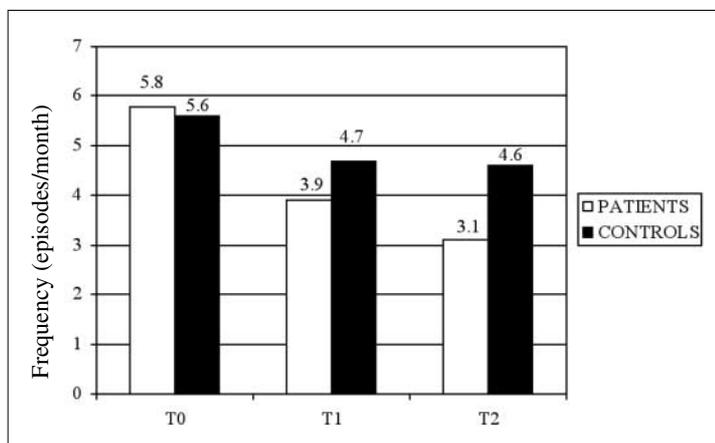


Fig. 3 Frequency of migraine without aura, more than four episodes per month (subgroup of eight patients)

- The reduction was more evident in groups subjected to the integrated approach than in those undergoing pharmacological therapy only.
- It was more significant in the group (7/8 patients) with a frequency of more than four attacks per month that was subjected to the integrated approach and to the Jacobson technique.
- A reduction in frequency and in length was also noted in T2 (follow-up on the 6th month).
- There was no significant change in the intensity (subjective scale of monitoring).
- There was a reduction in generalized anxiety (evidenced in self-reports and retests).
- There was an increase in self-regulating ability (evidenced by muscular distension and by self-control) [22]. Follow-up of treated patients was made every 3 months in order to evaluate the efficaciousness and the validity of therapy in the integrated approach.

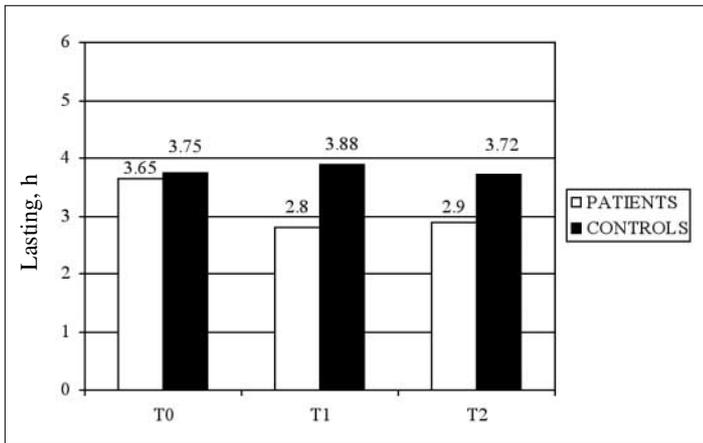


Fig. 4 Duration (h) of migraine without aura, fewer than four episodes per month

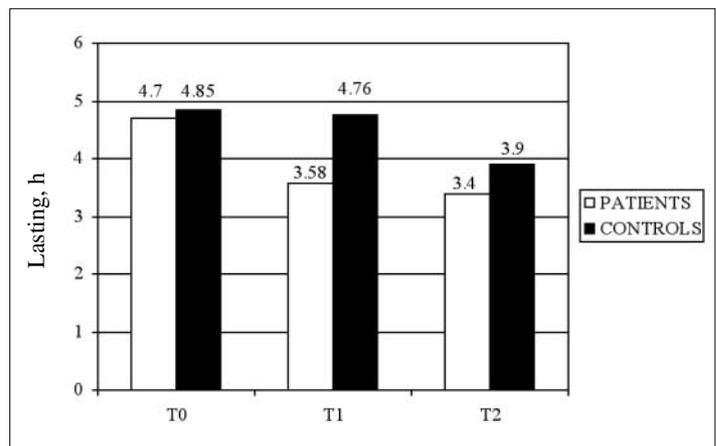


Fig. 5 Duration (h) of migraine without aura, more than four episodes per month

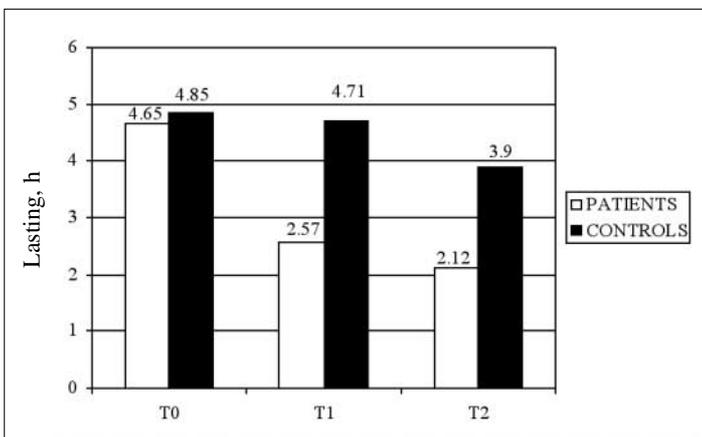


Fig. 6 Duration (h) of migraine without aura, more than four episodes per month (subgroup of eight patients)

Conclusions

Patients undergoing treatment with the integrated approach, compared to the control group, showed an improvement in cephalalgic syndrome [23].

- The improvement was seen in the parameters “frequency” and “length”. The intensity of pain did not show any modification.
- The integrated approach produced better results in patients with elevated frequency, length, and intensity (>4 attacks per month).

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