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Management of migraine attacks

The management of migraine attacks is based on the careful collection of a clinical history, to optimize the choice and use of drugs for symptomatic treatment, and to best inform the patients and involve them; these are essential prerequisites of the "therapeutic alliance" [1–4].

Clinical history

A correct diagnosis of migraine is crucial so that the drugs for migraine attacks can be effective. After excluding a secondary headache [5], it is useful to conduct a semistructured interview with a computerized record [6].

It is necessary to have a documented retrospective clinical history of at least 2 months or a registration of a prospective clinical history of at least one month. For this purpose, the headache diary is fundamental and should be filled in for at least three months, in which the *frequency*, *duration* and *intensity* of migraine attacks are registered. Understanding the characteristics of the crises orients the choice of drug for the attack. The total number of hours with headache per month, the intensity, the time it took to reach the peak, the presence of accompanying symptoms and the use of symptomatic therapy are all essential information and should be indicated. On the basis of the frequency, intensity and duration of the crises, the clinician may evaluate if the patient needs, in addition to a symptomatic treatment, also prophylactic treatment.

The use of a diary allows the identification of eventual occurrences of *triggering* or *aggravating* factors. Some of them cannot be eliminated (e.g. menstruation, weather changes, week-ends), while others can be partially or totally removed (e.g. physical fatigue, alteration in the sleep-wake cycle, bad eating habits and fasting, and certain foods, in particular fermented cheese, alcoholic beverages and chocolate, for which the relationship between intake and onset of headache has been established with certainty). Before beginning any symptomatic or prophylactic treatment, it is necessary to eliminate, whenever possible, each triggering or aggravating factor. This can, by itself, reduce the frequency or intensity of the crises.

The *characteristics of each attack* may vary even in the same patient, who, in some cases, can distinguish attacks of slight intensity from those of severe intensity from the onset of the attack, which may positively influence the therapeutic choices. The priorities of the patients should also be defined: in migraine with aura attacks, the patient identifies the aura as disabling rather than the head pain phase. Sometimes migraine attacks are accompanied by neurovegetative symptoms, such as nausea and vomiting, which may be, in some cases, more disabling than headache.

For the therapeutic choice, the clinical history of the patient and the drugs previously taken are fundamental (e.g. efficacy, inefficacy, loss of efficacy, adverse events) for a more precise orientation, since the different crises may have different responses in different patients, and also in the same patients. The quantity of drugs taken in symptomatic therapy should always be measured, to identify potential or current situations of abuse which, in addition to possible pharmacological adverse effects, may induce the transformation of migraine into a chronic daily headache and make the treatment less efficient or make the eventual prophylactic treatment inefficient.

The coexistence of *other pathological conditions* (*comorbidities*) should be investigated, because it influences the therapeutic choices, i.e. uncontrolled hypertension and ischemic cardiopathy are contraindications to the use of triptans and ergot derivatives, whereas gastroduodenal ulcer is a contraindication to the use of analgesics and non-steroidal anti-inflammatory drugs (NSAIDs). Drugs taken for other diseases should not be overlooked; they may interfere with antimigraine drugs or favor the onset of attacks (i.e. taking propranolol increases the levels of rizatriptan; the vasodilatatory action of nitroglycerin may facilitate the onset of a migraine attack).

The occurrence of *other concomitant headache types*, together with migraine, should be considered. For these concomitant headache types, the choice of symptomatic treatment may be different. In this regard it is also necessary to teach the patient to recognize the different headache forms, by providing informative pamphlets. This material should be available at each center dedicated to headache treatment.

Therapy

Symptomatic therapy alone is used when the number of attacks per month is less than 3 or when headache occurs less than 4 days per month. Prophylactic treatment may be adopted even when attacks are particularly disabling or when these attacks negatively condition the patient's quality of life. The appropriate choice of drug is based on the careful and critical evaluation of the clinical history. For the treatment of migraine attacks, several specific and non-specific therapeutic tools are available. Some of them have been in use for a long time, while others have been only recently introduced, and still others, which belong to the group of triptans, will soon be available.

Drugs for migraine attacks are distinguished into the following groups: triptans; analgesics and NSAIDs; ergot derivatives; and antiemetics [7–9]:

- *Triptans* are indicated for the treatment of migraine attacks of severe (grade 3) or moderate (grade 2) intensity. They are effective not only for headache but also for associated symptoms. In the majority of cases, the contemporary administration of antiemetics is not necessary.
- *Analgesics and NSAIDs* are indicated for the treatment of migraine crises of slight or moderate intensity (grades 1 and 2) or when triptans are contraindicated or ineffective. For certain drugs of this category, no prescription is required and over-the-counter drugs may be used, only if the physician has previously formulated a correct diagnosis.
- *Ergot derivatives* are indicated for the treatment of disabling attacks unresponsive to other drugs and with a low frequency (1–2 attacks per month), due to the potential risk of abuse. They should almost always be administered with antiemetics, since they can increase nausea and vomiting.
- *Antiemetics* are indicated as adjuvants in the symptomatic treatment of migraine attack, when nausea and vomiting are present.

The strategies for treating migraine attacks are two: the *step approach* and the *stratified approach* [10, 11]. The step approach is based on changes in therapeutic strategies through successive steps, in the case of inefficacy of one strategy. The stratified approach is based on the preliminary assessment of the intensity of the headache attacks in a certain patient, which from the beginning allows the choice of the most adequate therapy, while separately taking into account the patient and the attacks. The effectiveness of this approach in obtaining the most important objective, i.e. total recovery of the patient to normal functioning with the administration of analgesics and NSAIDs for slight-moderate crises and of the triptans for moderate-severe crises, has been demonstrated [12]. When the patient is able to recognize from the onset the evolution of the attack, he should be taught to choose the most adequate treatment.

The most appropriate drug should be taken at the lowest dosage useful for a complete and early resolution of the crises. Preparations with only one active drug should be preferred. Moreover, it is convenient to prescribe different therapeutic alternatives for attacks of different intensities for the patient in search of the most effective drug, always considering any eventual comorbidities. Moreover, it is advisable to provide the patients with rescue drugs, in case those indicated as first-choice do not produce the desired effects. Prescribing both a triptan and an ergot derivative to the same patient should be avoided.

The efficacy of the prescribed treatment should be monitored over time. Even in this case, the use of the *headache diary* is advisable. With the aid of this tool, it is possible to carefully assess the characteristics of the relapses, the effects of the treatment on head pain and accompanying symptoms, the use of the prescribed drugs and the eventual use of rescue drugs and occurrence of adverse events. In this way, it is possible not only to assess the efficacy of the therapeutic intervention, but also to collect information missing in the initial case chart, to correct any information erroneously given by the patients or erroneously interpreted by the physician, and also to identify a possible change in the pattern of attacks (e.g. seasonal variations, aggravation in the presence of stressful conditions).

Information and patient education

One of the most relevant aspects in defining the treatment of migraine attacks is the information given to the patients, to whom the nature of the headache and the measures available for both the symptomatic treatment and the prophylaxis of migraine attacks, if indicated, should be explained. The importance of the pharmacological history should be clarified (i.e. reliability of the information given; exhibiting the previous prescriptions, when available; the opportunity of keeping the prescriptions even in the future). After these preliminary remarks, the patient's experience regarding the efficacy and tolerability of drugs already used should be taken into consideration, with the aim of prescribing the most appropriate drug.

The aims of the ideal treatment for the resolution of migraine attacks and associated symptoms and for the rapid recovery to normal functioning, without adverse events and relapses or recurrences cannot always be obtained, neither in all patients nor in all crises. For this reason, correct information is needed to establish a solid therapeutic alliance. This will give the best results, and avoid creating unrealistic expectations that may hinder the patient-physician relationship or reduce patient compliance. Therefore, the patient should be informed of the reasoning behind the therapeutic choice and should be instructed on the appropriate use of the drugs and the possible adverse effects. The purposes and the eventual need for different drugs for different crises should be clarified. Lastly, the patient should actively participate in the entire treatment of the attacks. The patient should learn to appropriately use the headache diary and to identify and avoid possible triggering factors. Each patient should avoid aggravating factors and choose the appropriate conditions during the attacks to favor the resolution of the crises, such as resting in a quite room without lights and noise, attempting to sleep, avoiding excessively cold or warm environments, and using simple maneuvers which may give relief.

The physician should explain to the patient that satisfactory results can be obtained by avoiding the use of drugs that may cause dependency.

The previously mentioned points may contribute to the fundamental therapeutic patient-physician alliance. The doctor should be aware of the complexity of head pain referred by the patient and should try to place it in the context of the individual patient's experience. This contributes to establishing a relationship based on trust which is indispensable for the patient's compliance and for the success of each therapy.

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