The evolution of migraine therapy: a new concept of care

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Treating a migraine patient is one of the most challenging tasks that one must face in the medical profession. Few diseases, such as migraine, have such a high diffusion and such a complex etiopathogenesis. This means that the phenotypic picture of the migraine patient is so variable and complex that it makes it impossible to think of a single therapy.

Migraine has been known for centuries and since ancient times it has been tried to give a therapeutic answer to a condition that has always evoked a lot of suffering. However, the remedies have always been very empirical, trying to alleviate the pain with infusions, preparations or potions, often of plant origin, or with alchemies and maneuvers “exorcizing” the evil that struck the victim. In the nineteenth century, the discovery of ergotamine first and of aspirin then opened the pharmacological path to the control of pain. In the first half of the twentieth century, ergotamine and other ergot derivatives were developed and recommended for the treatment of migraine but their use was supported only by anecdotal data. However, the treatment was only limited to the acute phase, the attack. Still, there was no talk of prevention and the first attempts in this sense were always operated starting from derivatives of the ergot, the dihydroergotamine in particular, all burdened by a series of side effects that made it difficult to tolerate and reduced its effectiveness. Always around the years 1950–1960, new molecules have begun to appear on the scene of preventive treatment, such as amitriptyline, β -blockers, and pizotifen. These were used basically based on both the hypotheses, the vascular and the involvement of serotonin. However, the pathogenic mechanism of migraine was not yet clear and the hypotheses far from what we know now. Consequently, the results of the trials were often contradictory and the treatment was also weighed down by several side effects. In the 1980s, Moskowitz’s discovery of the

involvement of the trigemino-vascular system began to shed more precise and detailed light on the pathogenesis of the migraine attack. Shortly thereafter, the first specific medications for migraine, triptans, were synthesized. Almost all triptans have a very short plasma half-life and their use is actually limited to the treatment of the acute phase of the single attack. In fact, the understanding of the pathogenetic mechanism has not brought a real advantage in preventive treatment of migraine. Therefore, drugs continued to be used whose prophylactic action on migraine was due to random factors, borrowed from the use in other fields of neurology, or medicine in general. Like, for example, anticonvulsants, which were used by analogy of pathogenetic mechanism with epilepsy or because patients who already used these drugs for other reasons and also suffered from migraines noted an advantage on migraine itself. The consequence of this situation was that the effectiveness of migraine prevention drugs did not have a real increase over time and, to date, we do not have any specific drugs for preventive migraine. Furthermore, the use of these drugs, due to their non-specificity, is strongly influenced by side effects and poor tolerance.

Just as a consequence of what is mentioned above, the search for new therapeutic approaches, no longer based only on drugs, has explored, looking for new ways to try to improve the quality of life of migraine patients, reducing the frequency, intensity, and duration of the attacks. At the same time, two other phenomena have begun to make their way into the management of these patients: on the one hand, the awareness that migraine is a complex disease, where biological, genetic, psychological, behavioral, and environmental aspects converge to a different extent in the individual patient to determine the nociceptive imbalance leading to attacks. And, that an effective treatment cannot ignore any of these factors. The development of this awareness has paved the way for those that were initially defined as “alternative” treatments and then, more correctly, “not pharmacological”: biofeedback, acupuncture, psychological counseling techniques, psychotherapy, and mindfulness, but also TENS, neurostimulation, and botulinum toxin. Treatments that often show overlapping results, if not better, than those of traditional pharmacological therapies.

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The other aspect that prompted toward a change of the therapeutic approach to migraine patients was the development of media. Today, headache patients come to our clinics with a much greater awareness of their condition than 30–40 years ago. They often have specific knowledge and in any case have a completely different need, which is no longer a pain medication, but more information, more knowledge about the disease and treatment modalities, possible side effects, and the real cost to benefit ratio of every possible therapeutic path. Today, what the patient requires is to be able to participate personally in a process care where he/she is directly engaged as a protagonist.

The fallout of all these aspects is very important. Not only because the therapeutic process must foresee different moments, passing from an initial informative phase to a subsequent educational moment and then being able to arrive at the choice of the specific therapeutic tool, which must be well known and shared to really realize that doctor-patient alliance that is the only guarantee of a possible positive result. But also, and above all, because the goal that arises from this new therapeutic point of view must be completely different. It is essential to review what we must and can actually achieve, with a personalized analysis of the condition of the individual patient, both for the characteristics of migraine and for all the other aspects that define that patient. From the type of migraine, to the precipitating factors, so important in everyday life, to the response to the various medications already tried, to the emotional, behavioral aspects and the ways in which one's condition is addressed. All these will help to define new goals, with the patient's well-being at the center, regardless of the disappearance of the attacks or the number of days of migraine or the amount of drugs used to control pain, which remain important goals but not enough to achieve by itself a significant result.

This concept is masterfully explained in the pages that follow, and I invite you to read with great attention from Paul Rizzoli, director of the “John Graham” Headache Center of

Harvard, Boston, who in a very farsighted way hypothesizes and proposes the “Integrated Practice Units,” centers where this new patient care process is carried out by trained ad hoc multidisciplinary units. Naturally, this new way of managing the patient must also include different evaluation methods, which are actually already underway, if we think about how the burden of the disease has been given more importance in the last two decades and scales aimed at measuring the impact of the disease on daily activities have been introduced in the evaluation of the results, both work and social, family or leisure and, consequently, on the quality of life and the sense of “well-being” of the individual patient.

Last but not least, in this new scenario, what is expected to be a second epoch for migraine therapy fits. Returning to the pharmacological aspects, as the triptans have revolutionized the management of the acute phase, the arrival of anti-CGRP drugs may represent the long-awaited breakthrough in the treatment of prevention. Always starting from the pathogenetic mechanism, the synthesis of a specific product, and its imminent marketing, can really radically change the management of preventive therapy. And that is what we all hope for, in order to further enrich our therapeutic offer and, ultimately, contribute to improving the lives of our patients.

In this National ANIRCEF Congress, we will talk a lot about this new therapeutic possibility, but above all, we will talk about all these aspects that have helped to review the process of care we can offer our patients, from the new knowledge on pathogenetic mechanisms to the characterization of the key clinical aspects which, combined together, can make us better understand the situation of each individual patient who turns to us for help.

Compliance with ethical standards

Conflict of interest The author declares that he has no conflict of interest.