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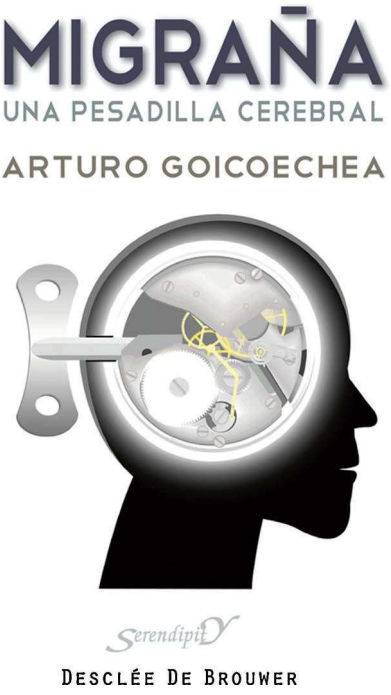
BOOK REVIEW

Rediscover the brain

Redescubrir el cerebro



The fact that you are reading this review establishes a high statistical probability that you are a conventional neurologist. You know many of the dozens of types of international classifications of headache, you diagnose migraine, explain to patients that they have a genetic disorder that will accompany them for life, give them advice to avoid trigger factors and prescribe treatment for them, perhaps following the guidance of the SEN Headache Group (incidentally, you also have a higher probability than the average population of suffering migraines).

Arturo Goicoechea was also a conventional neurologist, although he was probably never convinced that the passage through his consultation would be more than an irrelevant anecdote in the stormy life of a migraine patient. Of course he would have some successes, as do homeopaths, naturists and even those who remove the temporal artery. However, he went on to study the physiology of pain in depth and then he found a surprise: biologists, chemists, linguists, computer experts... all of them had been spending years making significant progress in the study of brain function and the mechanisms of pain genesis, but for some reason neuroscience had not incorporated that knowledge. Neurologists seemed to have decided that the head was a sealed compartment to which findings on the neurophysiology of pain demonstrated in the rest of the body did not apply. Arturo Goicoechea spent years of studying a scientific literature that neurologists rarely approach, forming a personal elaboration of great originality and polishing his methodology in daily practice. Now, after some scarcely appreciated efforts to spread his vision among his colleagues, he has published a book aimed directly at patients.

The book is read with pleasure. It is written in a flowing and almost conversational style but without trivialising the content; it fits in the best tradition of popular science. It can be read on a rainy weekend, although I preferred to savour it more slowly. Practically every chapter contains unexpected information that may clash with your ideas on migraine and that should be settled before moving forward.

You already have a clear concept that migraine is not a "vascular headache" but rather is of a cerebral origin, but it is likely that you follow the usual pattern of assuming that the origin of the episodes lies in a pathological brain structure (channels, neurotransmitters) activated by some "trigger" and with a fuzzy "psychological" enhancing context including the vagueness of stress. In this book you will discover the brain as a central organ, planner and manager, which initiates evolutionarily selected programs to resolve biologically relevant situations. One such program, pain, is biologically designed (selected) to defend us against necrotic tissue damage, real or potential. But our defence systems, immune and nervous, include a learning component that can develop errors. The immune system may end up treating grass pollen like a dangerous molecule and implement a defensive program that causes terrible spring allergy for the sufferer. Similarly, the learned element for cerebral defence can categorise objectively safe situations as a threat of necrosis: menstruation, lack or excess of sleep, certain foods, weather changes, stress, etc. Consequently, the brain activates its defence program aimed at forcing the conscious individual to adopt a strategy for protection: ceasing activity, isolating from sensory input, removing the hypothetical ingested toxics, taking

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analgesics. Migraine is therefore not a defect of the system, but the erroneous activation of an innate biological program by a cerebral evaluation error. It is this evaluation that is a learned, cultural phenomenon. It is forged by personal experiences, family and social learning, and "expert information" is crucial: our messages of incurable genetic disease, hyperexcitable brain, need to avoid triggers, relief chemistry...

The chapters in the book spell out a dialogue in consultation with an intelligent migraine sufferer. It is a didactic, almost Socratic, manner of exposing the conceptual framework and the difficulties in transmitting it to patients. Basic concepts of brain physiology that are very unfamiliar to many neurologists appear successively: efferent copy, mirror neurons, future memory, punishment-reward system, etc. In some chapters, the neurologist is left alone with the resident, allowing various more professional aspects to be developed. As a teaching method, it uses a philosophically questionable, dualistic concept, but one that is useful for the purpose of teaching. In this concept the brain, ensuring what it considers to be the interest of organism integrity, activates programs directed towards self consciousness of the subject in order to obtain a specific behaviour, even at the price of thwarting personal ambitions. In a linear manner interspersed with memory loops, the chapters build up a coherent development, solidly grounded in brain physiology. Criticism is not spared for many ideas propagated by "official neurology". At the end, it is clearly understood in what sense the book is not a consultation of the neurologist with his patient, but rather a "class" from the "neuronologist" for his "student". It is not possible to talk to the immune system, but we can talk with the brain. The idea is to, through the knowledge conveyed by language, remove acquired misconceptions and make it possible for the individual to defend his personal project and dialectically confront the intentions of his mistaken brain. It is not intended as a therapy or a prescription, but as information that allows students to understand the real terms of the problem with the hope, but without the promise, that this will disassemble the cerebral error.

What can happen if you read the book? First of all, that you cannot tolerate it. It is not easy to accept a radical correction of the way migraine is understood, to discover our own ignorance of the basics of brain physiology and assume that one forms a greater part of the problem than of the solution. It could also occur that you do not understand it and conclude that it is just another one of those self-help books: if by the end it is not clear to you that the book has been talking about physiology rather than psychology, then you have not understood the book. One form of incomprehension, which has been reported to me, is the phrase "I agree with the approach but not with the solution"; this is an expression containing a logical contradiction that you will be able to discover by reading the book. Another possibility is that your interest in delving more deeply into the concepts developed in the text becomes awakened. As a book aimed at patients, it does not include references. There is an often complex bibliography, with high-impact journals not usually present in our review articles and which many neurologists will find strikingly alien. Of course, the book could also leave you in no man's land: after "seeing the light", you may find it incongruous to continue with the usual approach towards migraine, but to adopt the new methodology also requires the assimilation of new concepts. And this is a practice for which we are not trained, a form of cognitive therapy.

Or maybe you will decide to prepare yourself and enter this new territory. This book might even make you feel a professional obligation to do so. It is not necessarily an easy path. It states that up to one third of patients do not return after the first visit and some even go to the patient service asking to be sent to a "real neurologist". I am aware that there is a note from a family doctor specifying "avoid Dr. Goicoechea": it seems that it is less acceptable to talk about the brain than about channels and neurotransmitters. But the brief reference to the results does not seem insignificant in a field that is often so ungrateful. Furthermore, when one meets an "ex", a former student of Dr. Goicoechea and former migraine patient, one senses that there must be much more than just intellectual satisfaction in store. We all see more and more patients with physical pain and without organic damage for whom medicine offers little solution. As neurologists, being supposedly particularly skilled in the organ that manages the problem, we should not remove ourselves from this situation.

At least, after reading the book it will be more difficult for you to attend meetings with headache experts organised by the latest Triptan: you will feel as if, in a course on reference searches, you were lectured about the circuitry of the computer and not about the program. Discoveries about brain programming continue at an unstoppable pace and are affecting other sciences: neuroscience cannot be the one left out.

Yes, I think that you will enjoy reading this book and welcoming your brain.

A. Digón

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