BOOK REVIEWS

The book review section of the Journal of Psychiatry and Neuroscience provides critical synopses of relevant literature in three categories: brief or extended reviews of recently published books and reviews of books that are of historical interest. This format is intended to provide variety of subject matter and quality of content and give reviewers the opportunity to express their opinions and ideas creatively and imaginatively.

We encourage readers to recommend books for review and to offer to review books that they have read and which justify a review. This will help broaden the number of topics covered as well as stimulate the interest and participation of the journal’s readers.

EXTENDED REVIEW


Serotonin (5-HT) is an ubiquitous substance, found throughout the body, which has become a common focus of interest for psychiatrists, neurologists and neuroscientists. Although originally discovered in the 1930s and isolated in 1948, only in the past decade has it caught the imagination of clinicians and basic scientists, particularly those exploring the basis of behaviour, mood, pain and headaches. The secret of how such a simple chemical substance could have such a variety of different physiological effects resides in the various kinds of serotonin receptors which are found in different tissues and organs.

This book examines the role of serotonin in depression, headaches and related conditions. The editors are all from Italy, where much research into serotonin has been conducted, but they have enlisted authorities from around the world to add chapters on their own fields.

The chapters vary in quality, but some contain excellent reviews and new material to which I will refer frequently. Fenik and Humphrey give a nearly up-to-date account of 5-HT receptors. Since this book was published, they have added to the research on receptors, which is advancing at a furious pace. Edvinson describes the particular receptors involved in the cranial circulation. Sicureti has written an excellent review of the role of serotonin pathways in headaches, and Cassano and Maraziti, its role in depression. The subject of chronic daily headaches is presented by Mathew. The possible role of serotonin and neuroendocrine factors in this condition and in cluster headaches are explored by several authors.

The role of serotonin in migraines is extremely complex. IV 5-HT can both precipitate and relieve migraine headaches. Blockage of serotonin synthesis can cause a panalgesia syndrome. While reserpine-induced serotonin depletion in platelets is associated with the precipitation of acute headaches, there is a reduction in migraine attacks during the subsequent month while serotonin is slowly restored. Certain 5-HT receptor agonists precipitate headaches in people who suffer from migraines, while most relieve acute attacks. The answer may be found in receptor specificity, with 5-HT-1D agonists generally relieving migraines. 5-HT-2 antagonists are used as prophylactic agents for migraines. Clearly, there is still much to be learned in this field.

In the case of mood disorders, the situation is even less clear. Both high and low levels of serotonin activity have been found in patients with depression. Again, the receptors may hold the key. 5-HT-2 receptors seem to be important in depression, while anxiety is related to 5-HT-1 receptor activity. Up and down regulation of receptors are likely responsible for depression and the effects of antidepressive medications.

In trying to untangle this complex scheme, one may be forgiven for concluding that the only common factor in headaches, depression and serotonin perturbation is the nervous system itself.

I found many of the chapters on topics that were somewhat outside the main theme of the book to be very interesting. Chazot, from Lyon, reports on their experience with pinealectomized patients who have headaches and depression, presumably as a result of the loss of melatonin, which is metabolized to serotonin. Melatonin may also play a role in some features of cluster headaches. Studies in chronobiology may give new insights into the basis of mood disorders, cluster headaches and perhaps even migraines. Serotonin is undoubtedly involved as well in these cyclic conditions. It is less clear whether or not it is involved in menstrual syndromes, but headaches and depression are often part of premenstrual syndrome. There are several chapters in the book on this subject.

The book would have been of greater value to the casual reader had the editor added a concluding chapter summarizing the information. Nevertheless, this book provides a wealth of information on serotonin, depression and headaches, but only those who are specifically interested in the topics covered will find it worth the price of $130.00. However, I recommend it to psychiatrists who wish to have up-to-date information on some of the biochemical bases and the mechanisms of current therapeutic agents for treating depression. Headache specialists and behavioral neurologists may also find it useful. It will be of less interest to others in the profession.

R.F. Nelson
Ottawa, Ontario, Canada