PSYCHOLOGICAL AND ALLERGIC ASPECTS OF ASTHMA

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With a Foreword by

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Presents theoretical and empirical data relevant to the individual with asthma. Discusses problems of methodology in psychosomatic research and suggests procedures for more rigorous experimentation.

Directed to physicians and to behavioral scientists who treat patients with bronchial asthma and to those engaged in psychosomatic research.

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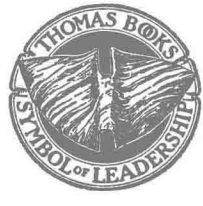

CHARLES C THOMAS · PUBLISHER
Springfield · Illinois · U.S.A.

Published and Distributed Throughout the World by
CHARLES C THOMAS • PUBLISHER
BANNERSTONE HOUSE
301-327 East Lawrence Avenue, Springfield, Illinois, U.S.A.
NATCHEZ PLANTATION HOUSE
735 North Atlantic Boulevard, Fort Lauderdale, Florida, U.S.A.

Library of Congress Catalog Card Number: 65-20842

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Printed in the United States of America
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PSYCHOLOGICAL AND ALLERGIC ASPECTS OF ASTHMA

FOREWORD

A FOREWORD FOR A BOOK which one has read in galley proof form is no more than an advance review which accompanies the book wherever its travels take it. For better or for worse (than what?) it is an integral part of the book itself. The amenities demand of the writer that he be critical, but not too critical, and that obliquely or otherwise he highlight the better points of the text so that the prospective purchaser not only buys the book, but hopefully also reads it. Who of us has not bought books he has not read? This is a book which must be read more than once and for what I hope I may present as compelling reasons. That I use the foreword as a forum for the presentation of my two pence worth will not take the limelight from the author-editor who has done a good job.

It is refreshing to be able to write that the pages which follow are rich in useful information not readily available in any other text of which I have any knowledge. It appears that asthma is easier to treat than one thinks, but more complex than one imagines. The reader is gently taken by the hand and led out of a series of mazes into the clean air of new relationships of which he was undoubtedly unaware. It is impossible not to take the subject matter to heart and as a consequence better understand what is going on in the body as well as in the lungs of an asthmatic patient. I am all for anything which will result in the better treatment of asthmatic patients, many of whom are mistreated and many more of whom are incompletely, superficially and intermittently relieved of their overt symptoms.

There is a catch. Anyone who buys this book must be prepared to read it several times. The individual sections are complete in themselves. Each, as has been noted, requires the wearing of differently tinted spectacles. The editor who is also the author of a great part of the book informs us that all of the material spread out for us is not of equal value.

After the subject matter has been inrecepted, as it were chronologically, if only because there is no other method of reading a text, it must be digested. The first reading is then for knowledge and the second is for re-evaluation of the perspective gained. This is a necessary part of the reading of some books because when one knows the final chapters one sees the beginning chapters in a new light. There is the intellectual maturing process which places the facts one remembers as well as those one acquires on re-reading into sets of relationships in new frames of reference. This re-evaluation can only take place when all the text is present, as it were, in a setting of simultaneity.

Anyone who has read a textbook critically, or anyone who has, with any awareness, practiced medicine, realizes that there are a number of dichotomies. I cannot discuss them all, but I can lightly touch upon Texts vs Patients; Allergy vs Immunology; Asthma vs "Asthma" and the Holistic vs the Comprehensive method of treating asthmatic (or for that matter any other) patients.

The texts (present company excepted) abound in the descriptions of diseases and disorders. The hospital wards and the offices of physicians are crammed full of patients who are ill. It does not take much insight nor many years of practice to come to a realization that a disease is not a patient. It requires much greater insight and many more years of practice to realize that a patient is more than a disease. There are physicians who practice for all of their mature lives and who do not see that a symptom is a symbol and little if anything more. The parts of the body communicate with each other in a language which is not that which the patient uses to describe his state of disorder to the physician. The patient's communication may be helpful or it may be misleading. At heart we are all veterinary physicians. What is more, the physician who treats the symbol also treats the patient (another dichotomy) who presents patterns of symbols thought of as representing diseases.

The author is aware of some of the problems of those who attempt to write texts. When these deal with more than one disorder they cannot help but give the reader a space capsule point of view. The hills and valleys are smoothed out. There is no men-

tion of the craters and the Grand Canyons which a physician may spend all of his life, hopelessly, attempting to bridge.

I have before me a text of internal medicine which devotes as much space to a description of amyotrophic lateral sclerosis and the porphyrinurias as it does to drug allergy and the atopic diseases. A physician could practice for twenty years and see no example of the first two disorders, and cannot practice for one day and not encounter many examples of the third and fourth. In the same frame of reference, are the psychosomatic aspects of asthma as important as the allergic? It depends.

Many of the texts, and those which are concerned with allergy are no exception, speak in a meta-language. A false cause is invented to "explain" what is thought of as an effect rather than as a state. The patient is allergic because he inherited or became the victim of an exudative diathesis. It is reasoned that if he did not suffer from an exudative diathesis he would not be allergic. In other words, he is allergic because he is allergic. A word (or words) used to describe a word (or words) as though it were a thing, which it is not.

Is this point of view extreme? We have inherited these medieval and demoniacal notions of disease and talk of what appear to be explanations and rationales. Who of us has not been caught in the trap of "resistance"? When one lacks this mysterious quality often supposedly associated with menstruation, puberty, menopause, avitaminosis, malnutrition and other states more often listed than defined or proven, then one acquires disease. Why one disease and not another? How does one know that resistance is absent? Why, of course, the thing speaks for itself, there is the disease! How else could it have appeared?

The most subtle of words to conceal ignorance is seen in the notion that one can grow out of something. It is true that time is a factor in physiological states as puberty and the menopause. Bit by bit, like mice, the seconds nibble away at our lives and everybody grows older because the alternative is being very dead. Why does no one ever say that anyone grew into a disease although we expect to be plagued with the degenerative disorders of age? All treatment of all the diseases of which it is said we will grow out of is part of the same stream of whatever it is that we term,

time. Of time, it has been said, that we stand still while it flies.

I have yet to read a text which makes mention of feed-back mechanisms. For example, what is the effect of hyperthyroid states on the thyroid gland and of naturally occurring insulin antagonists upon the pancreas? Once the baroreceptors have raised the blood pressure, what does the elevated pressure do to the centers? Shall we lower the pressure as, once upon a time, we lowered temperature which warmed up the leucocytes and made it hot for the bacteria? Granted that, in some subjects, asthma is a learned response, how much feed-back is there? We would note it as more and more spasm engendered by less and less of the initial causative substance or state, and as a sort of spread so that there would be more and more spasm as a result of other "causes". Some types of treatment block the traffic; some divert it and some control it. Which shall we use and when or does the patient need something else again?

I am happy that the present text is free of what I think of as the "escape hatch": the chapter which deals with psychological factors. When it is short and inconclusive the reader is made to feel that an inconvenient mind has somehow become attached to a diseased body and interferes with the orderly progress of what would be a disorder otherwise easy to treat. When the chapter in question is long and detailed, it appears that an inconvenient body has become attached to a sick mind. In either case, the chapter concerned with what is thought of as the psyche truly makes hash of the remainder of the text. One is asked to forget that one can eat calf's brains *au beurre noir,* but that one cannot eat its mind into which one can penetrate, if that is the word, only so far. One might well ask, "Is anyone there?" Any psychology is an application of the chemistry and physics of the time, and as these change so does the understanding of the field.

The pseudo-relationship of allergy and immunology is more dangerous. As practiced today, allergy is no more than a practice in search of a science. Immunology, a science in search of a practice, is not and may not be the "science" in question.

Immunology is characterized by some hundreds of thousands of papers each of which is a cameo presenting perhaps one fact, occasionally of doubtful significance, and not necessarily related

to many or any of the other facts of immunology. None are related to the practice of allergy which has not been changed by any discovery in the field of immunology. The proof is obvious. The treatment of allergic patients has not been changed (by immunology) since the classic paper published in 1911 by Freeman and Noon. Immunologists have no explanation whatsover for what occurs when an extract is injected.

The immunologists I know are almost all of them miscellanists. If the word "asthma" were not unfortunately spelled with six letters, it would, to immunologists, be a dirty four-letter word. When will those of us who are physicians and immunologists, and those who are immunologists who have never treated an allergic patient, come up with something useful? In another text I once noted that, as immunologists we have learned how, with greater and greater skill, with purer and purer materials, in smaller and smaller quantities, more and more efficiently, to kill larger and larger numbers of guinea pigs. Is it not our job to add years to the lives of our allergic patients and not to subtract months from the lives of guinea pigs?

The relationship reminds me of a double boiler. In the lower pot, the water of allergy boils away furiously. There is truly no scientific basis for anything the allergist has, with great skill, learned to do. He can do a superlative job, although he knows nothing of antigens or antibodies, histamine, acetylcholine, anaphylatoxins, slow reacting substances, bradykinin, serotonin or proteose-protease balance or other enzyme relationships. One who knows all there is to know of these subjects often cannot and usually does not practice good allergy. The water boils and boils and boils. It need not at all concern itself with what is cooking in the pot which contains the brew of immunology and which happens to rest above it.

Some day perhaps the unrelated bits and pieces of immunology will be put together and will make sense. Allergy will perhaps become a small part of immunology. Would it not be ironic if immunology became a small part of allergy?

During the last seven hundred years there have been advanced at least 350 hypotheses as to the cause of asthma. To be colloquial there are asthmas and there are asthmas, and it would be wise to

know, or rather to define, which one is being discussed. Are all of the theories correct? No! Are all of them incorrect? No! Are some of them right in part? When an egg is stale are any parts of it good? No! The fact is that at different times the same patient may be differently asthmatic. He may for purposes of classification be thought of as predominantly more often asthmatic for one reason than another.

If these statements seem to border on the side of exaggeration, let the facts speak for themselves. We can begin with treatment. Some of my patients no longer wheeze because they have received x-ray treatment of the hilar glands and therefore secrete less mucus. Others have responded splendidly to elimination diets. There are those, few in number, who, for reasons unknown, have responded to glomectomies, neurectomies or sympathectomies at times when these surgical procedures were in style and were being used while they continued to do good. I have lessened or abolished attacks of asthma by reduction diets, physical fitness programs and breathing exercises.

In some patients psychotherapy, as counselling, has been enough. Others have needed analysis and others again conditioned reflex therapy or hypnosis. There are those who benefit by parentectomies and others who die when separated from their loved ones. For these the old adage has been shown to be true. The more neurotic the patient, the less immunologic he is likely to be. There are large numbers of patients who are typically allergic and only seasonally asthmatic. They need injections of extract. Others wheeze when afflicted with respiratory infections. They do better with injections of vaccines and sometimes with prophylactic and, at other times, with therapeutically administered antibiotic agents.

What are we to do with the patients who are supposedly helped by the low humidity of the air of Arizona, but not when the same low humidity is made a part of their home environments? Is it to be assumed that they do better because of the lesser and fewer changes in barometric pressure? If so, why do some of their attacks in Arizona or in Boston occur while the barometer is standing steady? Some react adversely to the types of air pollution in Los Angeles, Yokohama, New Orleans or London, and others, ap-

parently no different, remain unaffected. There are a few who do not respond to expectorants and to bronchodilating agents, but who remain well for long spans of time when they have been subjected to ether anesthesia and lung wash-outs. Their abnormal pulmonary physiology becomes pathological and by what I consider physiological means can be returned to what is thought to be normal function.

How easy and how wrong it would be to conclude that all of the patients are psychologically disturbed and that we have, by any method of treatment, given them a peg on which they could hang their hats. The records show that the patients do not necessarily respond in any particular sequence to the modalities of which only some have been listed. They seem to respond best only to the method of treatment suitable for their type of disorder and little, if at all, to other methods. There are, for example, uncommon patients who are completely free of symptoms when treated with small quantities of arsenic. The prescription of a mixture on a double blind basis, similar in all regards but free of the drug results in a recurrence of the wheezing usually within a period of days. These patients do not do well with administration of the corticosteroid hormones, vaccines or psychotherapy.

One of the most compelling reasons for re-reading this text is to be forced to remember that the asthmatic patient who, today, is reacting to pollen, may, tomorrow, lose a loved one and despite a decrease in the pollen content of the air may suffer from severe bronchospasm while engaged in the strange and prolonged ceremonies which are associated with burying our dead. Before anyone becomes dogmatic and states that it is the flowers of the bier which are responsible, may I say that the asthma is just as severe when there are no flowers.

How do we know all of these statements to be true? In each group there are several bell-wether patients. The asthmatic patients seen in groups but studied as individuals react in patterns. Many of the incompletely treated pollen-sensitive patients will report symptoms as of the same morning, although the slides are bare of pollen. A temperature inversion will, within a radius of fifty miles, affect several hundred patients who do not know each other and do not know any meteorology, and usually within a

period of two hours. A precipitous drop in barometric pressure and an east wind will set the telephone ringing because of the patients who have not been educated as to what to expect of storm centers. In New England, a southwest wind of any given velocity and duration will bring molds, pollens, plankton and unidentified advenient particulate materials into our air and make the identical groups of patients ill. When the heating systems are activated it only takes a day or two for large numbers of patients who are not necessarily sensitive to dust, at least as we recognize it, to begin to wheeze.

We will least often go wrong if we think of the asthmatic patient as asthmatic regardless of what he says or our stethoscopes tell us or the vitalometer measures. He is asthmatic 24 hours for the 365 days of the year. When he is allergic, the allergy will almost always, but not invariably be recognizable. No matter where he resides, or what he does, he lives with a consciousness of his asthma in the sense that a diabetic is always conscious of the type of food he eats. The asthmatic patient knows that he will react differently than do others to the stresses and strains of everyday life. The anticipation of strenuous exercise, or of any need for pulmonary recruitment will tend to narrow his bronchial tubes although he may not overtly wheeze. Should he shout or laugh he will tend to do either differently than a non-asthmatic subject. Place him in circumstances of expected strain and he will inhale more quickly and often as not develop an inspiratory wheeze. His voice will change in register, resonance and rhythm. He dreads a cold or bronchitis because he knows what they will do to his lungs and how much longer than others he can expect to be ill.

Other disorders of development or of degeneration can be expected to affect him differently from others. Although controlled, the emphysema due to age will proceed in steps rather than as a slow process to which the rest of the body adjusts itself. It is more likely than not to be associated with gastric or duodenal ulceration, although he may not mention secondary illnesses because of his preoccupation with respiration. Should he become hypertensive, the physician can depend on it that the rauwolfias will often be responsible for a stubborn and severe nasal stenosis.

Sedatives are likely to cause respiratory depression. If he takes thiazides it appears that he is frequently the victim of hyperglycemia.

One day his asthma will need an injection of epinephrine and on another, the drug is ineffective, but the patient responds to intermittent positive pressure with a mucus-thinning preparation. A tablet of aspirin and some alcohol may relieve him, or it may be responsible for status asthmaticus. He may be helped up the stairs to the office in a highly agitated state and deny any cause for the agitation except for the asthma itself. His breathing is paradoxical, and he is sucking in his abdominal muscles and decreasing his thoracic volume with every inhalation. A tranquilizing agent or simple hypnosis will, within minutes again, make a supposedly normal man of him.

Yesterday he wheezed because he was exposed to an aerosol of Lysol. Tomorrow he may wheeze because he may eat shell-fish to which he is not allergic, but which, when he ingests it, releases enough histamine to make him ill.

The author wisely notes that, only too often we pay lip service to the concept of treating the disease and the patient and having said our say, forget all about the patient who is a total person. In his attempt to emphasize his point of view he was wrought better than he planned. We are informed by means of the papers chosen to illustrate his point of view that the patient who is asthmatic must not only be treated holistically, but also comprehensively and with great sympathy and understanding.

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PREFACE

THE FIELD OF ALLERGY, and asthma in particular, has undergone many changes during the past several years. As could be reasonably expected, these changes have reflected different positions in the swing of the pendulum of various, often extreme, theoretical orientations employed in trying to understand the disease. Indeed, its acceptance as a disease (rather than a syndrome) is itself not totally accomplished and is another reflection of the divergence of views relevant to the development of our conceptual framework. However, in spite of the differences in orientation which have been alluded to, the patient with asthma is, in a sense, outside the stream of controversy, and serves as a source of demand requiring an immediate response by the general practitioner, allergist, and/or psychiatrist responsible for his treatment. It should be noted that as soon as we speak of "his treatment" rather than the treatment of the specific disease, much of the existing controversy loses some of its significance and is relegated to the role of academic inquiry.

This collection of papers, then, is not offered in the hope of helping resolve the controversy, or necessarily to aid in developing an appropriate conceptual framework. It is, rather, an effort into the academic inquiry. The focus of the papers selected is not immunological or necessarily "psychosomatic." The focus is of a more historical nature, with one of its major objectives to stimulate research on the psychosocial implications of asthma which will meet the rigorous methodological conditions possible in the laboratory setting.

Collections of papers are often criticized on the basis of the dates of the original appearance of the papers included. This is unfortunate, and probably not very appropriate. The papers which follow were selected on the basis of the clarity with which they typify the particular purpose for which they were selected. Some are almost "twenty years old," but still seemed recent and

stimulating from the standpoint of focusing upon an important aspect of the individual with asthma.

The book is divided into six sections. Let me acknowledge, at the onset, that the choice of sections reflects my own interests and biases, limitations of length imposed by the publisher, and my own sense of "balance" in trying to present the central theme of the book. The theme is not necessarily startling or very original, but seems to require reassertion. The theme of the *individual* seeking aid by means of a presenting problem (i.e., asthma), is all too often dismissed with a cursory acknowledgment, and we then devote all our energies to finding allergens and other related factors (i.e., weather, environmental contaminants, temperature, etc.), skin testing, provocative bronchial challenges and hyposensitization. This approach appears equally limited in usefulness as trying to treat the individual with asthma exclusively with psychotherapy, dismissing (or drastically minimizing) the contribution of skin sensitizing antibodies to the distress of the individual.

The first section is a review of basic elements of research. An effort is made at establishing a compromise between such a detailed, elementary presentation of research concepts as to offend the intelligence of most readers and, at the same time, to give sufficient detail to be helpful to the investigator not well versed in the techniques of research.

The second section of the book attempts to give a historical perspective and theoretical overview for the development of the "psychosomatic" position. Viewed in the present context, this position is taken to be only a reaffirmation that it is not sufficient to treat a patient's disease, while ignoring him as a total person. Although this is an old, often stated truism, it is unfortunately still not practiced universally.

Section III touches upon what seems to be a central issue in the formulation of a theory of psychosomatic diseases. Stated most simply, the question is raised whether it is possible for an individual to unconsciously determine or select a body organ as a means of expressing his psychological "dissatisfaction." One of the papers in this section (Barendregt) is included because it seems to represent, from an experimental-methodological point of view, a very good study. Although by no means offered as an

answer to the basic issue of specificity, it demonstrates what I believe to be one excellent approach for studying a very difficult, elusive phenomena.

The fourth section tries to present the positions which, it is hoped, reflect the major psychosomatic points of view. This section is intended as a brief exposition, not of the various psychiatric theories, but of the ways in which an individual with a disease as asthma might be perceived. It is unfortunate that this general area of psychiatric inquiry has been so limited with reference to experimental data which is methodologically reliable. The reasons for this are numerous, but it has resulted in excessive speculation which is not (or has not been in the past) subjected to experimental verification. The papers in this section also seem to be an implication of the lack of agreement as to what constitutes a "psychosomatic disease." This would appear to be a worthwhile venture, trying to develop a more uniform, acceptable statement describing the criteria which must be fulfilled before the label "psychosomatic" can be appropriately applied.

Section IV deals with experimental approaches to asthma. Much of the work in this area has, of a necessity, been done with animals, with all the accompanying limitations in applying such data to humans. Nevertheless, this will have to be the area where the major break-through, if it is to occur, will take place. Limitations of space did not permit more than a brief sampling of the literature available; but each article was selected because it was thought to represent a somewhat different, potentially profitable avenue of approach.

The final section is, in a sense, a review and summary section. It deals with the treatment of the patient with asthma and, as such, is intended to reflect inferences made from the previous chapters. Such a section must always appear discouraging, for it emphasizes how little we know about our subject matter and how ponderous the obstacles seem. Yet it is hoped that these very features will stimulate new efforts and will yield some insight into the many problems besetting the field of psychosomatic asthma.

Such are the purposes of this collection of papers. Whether the purposes are worthy ones and whether they become realized, cannot be blamed on the many individuals who contributed to

the preparation of this book. I am greatly indebted to the many publishers who gave permission to reproduce materials they owned. To the authors who consented to have their work presented and who prepared new or revised material, I am very grateful. To my colleagues who encouraged me to carry the project to its completion, a special word of appreciation is due. And, finally, to my wife, who shared steadfastly my determination to complete the book and who graciously tolerated the demands upon time and temper which ensued.

M. L. H.