I. Introduction. Definition.

From early times bronchial asthma has been regarded as presenting a distinct clinical picture, and in the text-books the condition is described as a separate disease. For practical and didactic purposes this is still necessary. But the searching investigations pursued in recent years respecting allergic diseases have taught us that bronchial asthma does not constitute a separate pathological unit. It is only an isolated symptom. The asthmatic reaction is merely one single form, a single anatomical localisation among the patients' allergic reactions.

But although our increased knowledge in this field reduces asthma from a disease to a symptom, the dyspnea will in so many instances completely dominate the picture that for the patient himself it represents the central point in his disorder. It is the dominant symptom and may in many cases be his sole affliction. Therefore the condition appears also for the clinician as a well-defined picture of disease.

In this clinical unit it has been then sought to distinguish between different types of asthma. This was especially the case before the modern allergic research set in. When we read older counts of the asthma problem it appears that a distinction was made between two forms, a primary and a secondary, a genuine and a symptomatic. But this distinction is in general not very precisely drawn. It was usually assumed that purely nervous causes were responsible for the primary, genuine form. The secondary, symptomatic, form was ascribed to a fundamental disorder, which was supposed to give rise to the asthmatic affection by reflex action. The search for such a basal disorder has occupied a large place in asthma investigations in earlier

times, and pathologico-anatomical disturbances in several organs were pointed to as causal factor. There was talk of a uterine asthma and a dyspeptic asthma. Chronic tonsillitis, polypus and chronic sinusitis were made responsible for the attacks. Or else the asthma was regarded as a secondary consequence of other pulmonary affections, first of all bronchitis simplex. Finally, it has been known from earlier times that the asthmatic paroxysms might be brought on when the patient came into contact with certain odours, certain kinds of dust, chemicals etc.

The principal achievement of modern asthmatic reasearch lies in its having shown that asthma as a rule, perhaps always, is an allergic disorder, so that it has been possible to classify under a single general heading all the previously existing complexity of causal factors. Thereby the doctrine of basal disorders has been shoved into the background. The search for allergens has become the central point in the practical examination of asthmatics. For scientific research it is now chiefly the pathogenesis that offers the most interesting problems.

This conception of the asthmatic reaction as a single unit has borne rich fruit in therapeutic respects. But for clinical research it has to some degree signified a stagnation. One has to a large extent forgotten to distinguish between clinically different types of asthma, and attention has chiefly been devoted to the different types of allergens which come into consideration. We may here mention *Rackemann's* (82—86) distinction between "extrinsic" asthma *i.e.*, cases where the asthmatic reaction is due to contact with alien proteins in dust, food etc., and "intrinsic" asthma, due to internal causes, mainly to focal infection. *Hajos* (33, 34) distinguishes between climatic asthma (including asthma due to dust or animals), bacterial asthma and asthma due to internal secretions and to reflex action. *Kämmerer* (52) reckons with several forms, a purely allergic asthma, a toxic asthma, a non-specific reflex asthma and a constitutional, psychopathic asthma. *Peshkin* (77—79) makes an etiological classification into two groups, one due to hypersensibility for animal and vegetable proteins and one associated with infectious diseases. *Lederer* (61), *Tuscherer* (107) and *Engel* (24) distinguish clinically between

asthmatic paroxysms and asthmatic bronchitis. Otherwise we meet with the designation "bacterial asthma" in a large number of authors. Also *Mason* (67) supplies a clinical classification, but his conception of asthma is wider than usual and embraces allergic bronchial symptoms as whole (frequent fits of coughing, frequently occurring bronchitis without fever, typical asthmatic attacks, chronic asthmatic condition). Otherwise most authors use the name asthma as a common designation, without attemting any further clinical or etiological classification.

The principal fundamental points of view which have above been briefly outlined form the basis for the investigations which will be set forth in the following. We will maintain the view that the asthmatic reaction constitutes a pathogenetic unit with the tendency to allergic reaction as the main factor. In common with all others, we have experienced that a psychic, nervous factor plays an essential part in the asthmatic reaction. But in our opinion this nervous factor represents a complicating addition to the patient's tendency to allergic reaction, such that it may predispose him to asthmatic affection, but not such that it can constitute the only causal factor, at any rate not until the asthmatic reaction has been initiated in some other manner.

Buth even though we conceive the asthmatic reaction as being a pathogenetic unity, we must admit that clinically it may present itself in different ways. On analysis of a number of case-histories and clinical observations we believe we can distinguish between two different types of asthmatic reaction. Taking the asthmatics as they present themselves to us in medical practice, we can assign them to one or other of the following groups:

I. On the one hand we have patients who show the regular and classical asthmatic attacks, with well-defined beginning and end, of relatively short duration, some minutes or hours, seldom longer, in the form of a status asthmaticus and with freedom from symptoms between the separate attacks. Clinically, the condition may be complicated by other allergic symptoms. But in general the patients show no signs of lung affections between the different attacks, apart from emphysema. As a rule we meet with these patients in an interval when they

are free from symptoms. During their stay in the hospital they are in general exempt from attacks. The clinical examination has very little information to offer. The diagnosis must be based on the history of the case, on possible other allergic affections and on examination of the blood — eosinophilia is a practically speaking constant finding. These patients are for the most part young persons, or at any rate such as have not been suffering from the malady for a long time. Their case-histories very seldom extend over some years.

This type represents the classic form of asthma. In the following it will be summarily designated *bronchial asthma.*

II. In the other group of asthmatics the case-history is marked, in addition to the asthmatic reaction, also by catarrhal infections, especially by recurrent or chronic bronchitis. And their asthmatic troubles are most intimately related to these catarrhal infections, generally in such manner that the dyspnea arises in connection with a recurrence of the bronchitis. As a rule they get no asthmatic reaction exept when they are troubled by bronchitis. And when the dyspnea sets in it is of a different type than the ordinary asthmatic attacks. In these cases we have a more steadily persisting dyspnea, with insidious commencement, of long duration, days, weeks or months, with fluctuation between improvement and aggravation, often worst at night and easier in the daytime, but then again aggravated by exertions. These patients usually come to the doctor — or call in a doctor — when the symptoms are present. And on clinical examination one will then be able to observe in them, besides the difficulty in breathing, bronchitis of apparently the ordinary type. These patients are to be found in all age-groups. Often they have a very long history of illness.

In the following this condition will be designated *asthmatic bronchitis.*

Many asthma patients present a clinical picture which seems to represent *intermediate forms* between the pure bronchial asthma and asthmatic bronchitis. This matter will also be discussed. Further we shall show that the dyspnea in asthmatic bronchitis is a purely asthmatic reaction, pathogeneti-

cally of the same type as uncomplicated bronchial asthma, so that the condition may justly be named asthmatic bronchitis. Otherwise the chief object of our work is to give a clinical description of this asthmatic bronchitis, its mode of occurence, course of development and the picture it presents, to give an account of our bacteriological investigations and to point out certain therapeutic consequences.

As previously mentioned, this distinction between bronchial asthma and asthmatic bronchitis has also been proposed by other authors. But it is remarkable to note how little it has been considered in special works and comprehensive surveys of asthma. And in the text-books it is usually not particulary emphasized. On the other hand, the term asthmatic bronchitis has acquired a certain standing in medical practice in our country. The diagnosis is large employed by general practitioners, and "asthma bronchitis" is known and feared among the people. We have had for examintaion numerous patients with this diagnosis. But not all of them have had bronchitis with real asthmatic reaction. The majority have indeed had asthmatic bronchitis in the proper meaning of the term. But many of them have in reality been suffering from chronic heart disease with stasis bronchitis and cardiac dyspnea. It is necessary to distinguish more sharply than has hitherto been done amongt us between these essentially different conditions.

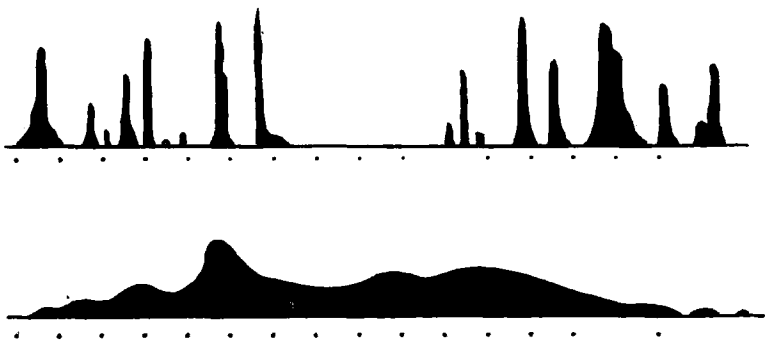

Fig. 1. Schematic presentation of a period with isolated attacks of asthma bronchiale (upper figure) and a period of asthmatic bronchitis (lower figure).