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LECTURES ON THE PRACTICE OF MEDICINE.

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LECTURE I.—INTRODUCTORY.

Multiplicity and Nomenclature of Diseases.—Plan of Course. 1. *Definitions of Disease.* 2. *Etiology:* A. *Predisposing Causes*; B. *Exciting.* 3. *Morbid Anatomy and Chemistry.* 4. *Symptoms: Subjective and Objective.* 5. *Modes of Dying.* 6. *Varieties of Disease.* 7. *Complications and Sequelæ.* 8. *Prognosis.* 9. *Treatment:* A. *Prophylactic*; B. *Curative.*

GENTLEMEN,—In commencing a course of Lectures on the Practice of Medicine, it has been a common custom to relate the chief events which have contributed to make the medical profession what it now is—a high and noble calling; to record the names of those from the days of Hippocrates to the present time, whose great achievements have conferred lustre on themselves and incalculable benefits on their fellow-men; and at the same time to speak of the prevailing delusions which have been, and still are, practised by the ignorant and unprincipled, in such a manner as to sink their profession, in name, to a base and degrading craft.

The largeness of our subject, however, and the shortness of our time, permit no such digressions. My object will be to lay before you, in as succinct terms as possible, the main principles of the healing art, which are generally accepted by the most thoughtful and observant of living practitioners, and which are the result of past, as well as of modern, experience. My duty will be to point out to you how you can best apply the knowledge of anatomy, physiology, morbid anatomy and pathology, chemistry, materia medica and therapeutics, which you have already acquired, to the right understanding and treatment of disease.

Neither will I occupy your time in teaching principles of medicine which have no application to practice, nor in any vain endeavour to discuss the best definitions of "health" and "disease." Suffice it to say that in applying the term "*health*" to a complex organism such as that of man, we imply the normal activity of all its component parts; and that the term "*disease*" signifies some deviation from the normal activity of one or more of those component parts. If this deviation from normal function be accompanied by appreciable alteration of structure, the disease is said to be *structural* or *organic*; but if there be no appreciable change of structure, we say that it is *functional*.

The first thought that must strike every student of medicine is the multiplicity of diseases which are defined and described in medical works, and a knowledge of which he is expected to acquire. These definitions and descriptions are, without doubt, highly useful, and, indeed, are absolutely necessary for the right study of practical medicine; but it may be well to state, once for all, that many of them are to some extent arbitrary, and that in practice you will often find that Nature fails to recognise many of the rigid definitions laid down by systematic writers. But, above all things, I would impress upon you the necessity of remembering that diseases are not distinct entities, or something superadded to the body, which your remedies can expel, as the public commonly believe, but that they consist in the perversion, from various causes, of normal vital processes.

The nomenclature of diseases is even more arbitrary than their definitions. The names of many are derived from some prominent symptom; while others are designated from the organs which appear to be mainly affected, from their supposed causes, from the observers who first described them, or even, as in the case of cancer, from some fancied re-

semblance between the diseased structures and some known object. The time, however, has not arrived for constructing a uniform pathological nomenclature on a scientific basis. Nothing but confusion could result from any attempt, at present, to alter the recognised names of diseases; and in these lectures we shall adopt those which have recently received the sanction of the Royal College of Physicians of London.

Each disease which I shall have occasion to bring under your notice, I shall endeavour to describe under the following heads:—1. Definition; 2. Causes or Etiology; 3. Morbid Anatomy; 4. Symptoms; 5. Varieties; 6. Complications; 7. Diagnosis; 8. Prognosis; and 9. Treatment. With regard to some diseases, also, it will be necessary to say a few words as to their history and geographical range.

I. *Definition.*—In defining each disease, I shall state succinctly those prominent characters which suffice, in most cases, to distinguish it from other maladies. Such definitions are of service to the student and the medical statistician, although, as already remarked, they must of necessity be sometimes arbitrary.

II. *The Etiology or Causes* of disease will occupy much of our attention. This is one of the most important subjects for the study of the physician, and one which has only of late attracted that share of attention which it deserves; and yet, as one of the most thoughtful medical writers (the late Sir John Forbes) has observed: "here the surest and most glorious triumphs of medical science are achieving, and are to be achieved." A knowledge of the cause of a disease is often of service in determining its real nature. For instance: the only real source of distinction between certain cases of tropical remittent, or of British relapsing fever, and true yellow fever, lies in their etiology. Again, a knowledge of the cause of a disease is of even greater importance in its prevention and treatment. A removal of the cause is often the first step towards a cure, and in regard to many diseases is the most certain means of preventing their development and propagation.

The causes of disease are very various. They are divisible into two classes—*predisposing* and *exciting*.

A. *Predisposing* causes are those which dispose the individual to suffer from the exciting causes of disease. If a given number of persons be equally exposed to the poison of cholera, or of some contagious fever, some will be attacked, while others escape. The former are said to be more predisposed to the disease than the latter. Or, again, the same indigestible article of food will, according to the digestive powers and natural tendencies of the individual, produce in one man an attack of gout; in another, an epileptic fit; in a third, a fit of indigestion; in a fourth, diarrhoea; in a fifth, a paroxysm of asthma; and in a sixth, no bad effect at all. So, also, exposure to wet and cold will excite in one man nasal catarrh; in another, quinsy; in a third, pneumonia; in a fourth, acute nephritis; in a fifth, acute rheumatism; and in a sixth, dysentery: the different effects of the same exciting cause being due to differences in the predispositions of the individuals. Predisposing causes are twofold. They include (a) some inherent peculiarity in the individual—in fact, the predisposition itself; and (b) the causes of the predisposition.

a. Under the former head, we have age, sex, hereditary predisposition, temperament, idiosyncrasy, general debility from any cause, and general plethora.

1. We have familiar instances of the influence of *age* as a predisposing cause in the many ailments to which children are liable during the period of dentition, and in those which attack females at the time of the first appearance and cessation of the catamenia.

2. *Sex* predisposes to disease in various ways. The structure and anatomical relations of the sexual organs in the two sexes are very different, and the diseases to which they are liable differ accordingly. Females, again, are liable to the many ailments incident to, and consequent on, pregnancy and parturition, and resulting from derangements of the catamenial discharge. The predisposition to certain diseases in the two sexes also differs greatly in virtue of the wide difference in their habits and occupations.

3. By *hereditary predisposition* is understood the transmission of the proneness to certain ailments, with other constitutional peculiarities, from parents to their offspring. Certain forms of morbid action are much

oftener transmitted in this way than others; as, for example, scrofula, cancer, gout, rheumatism, atheroma of the arteries, diabetes, asthma, apoplexy, epilepsy, paralysis, neuralgia, and insanity. Sometimes the tendency to a hereditary disease skips over, or lies dormant, in one generation, and shows itself in the next, thus proving that it may be transmitted by, without being expressed in, the parent. This has been called the law of "atavism."

4. Closely allied to those peculiarities of constitution which are transmitted from one generation to another, are those to which the term "*temperaments*" has been applied. According to many writers, all persons exhibit in their physiognomy or external aspect, one or other, or a combination of two, of the four following temperaments, viz., the sanguineous, nervous, lymphatic, and bilious; and by determining the temperament, it is said to be possible to predict the diseases to which the individual is most liable. You will find the leading characters of these temperaments laid down in most of the older systematic works on medicine; but here it suffices to state that they are much less heeded now than formerly, and that in a large number of persons it is impossible to say which temperament predominates.

5. The term "*idiosyncrasy*" is applied to peculiarities in certain individuals in which they differ from the generality of mankind, and which often manifest themselves in a remarkable proneness to certain diseases. The cutaneous eruptions which in some persons always follow the use of certain drugs or articles of diet, and the liability of other persons to paroxysms of asthma from inhaling certain odours, may be cited in illustration.

6. *General debility* arising from any cause, and manifested in an enfeebled vascular action, renders the nervous system more susceptible of external impressions, and thus predisposes to many diseases. Of a given number of persons exposed to a common cause, such as the poison of cholera, the debilitated will constitute a much larger proportion of those attacked than of those who escape.

7. On the other hand, a state of *general plethora*, or fulness of blood, predisposes to some diseases, such as gout and apoplexy.

8. The causes of predispositions to disease mainly act by debilitating the constitution. They are very numerous, but the following deserve special notice.

1. *Imperfect nourishment*, whether arising from a deficiency or unwholesome quality of the food, or from mal-assimilation.

2. *Habitual intemperance*, which deranges the digestive organs, besides inducing chronic changes of structure, with consequent impairment of function in various organs.

3. *Deficiency of the natural stimulus of pure air*, as in those who work or sleep in overcrowded and badly ventilated dwellings.

4. *Dampness or excessive moisture* of the atmosphere predisposes to certain diseases, and more especially to rheumatism, consumption, croup, and ague.

5. *Insufficient muscular exercise* predisposes to general plethora, constipation, hæmorrhoids, and other symptoms of portal obstruction, gallstones, &c.

6. *Excessive or repeated evacuations*, either of blood or of the serous parts of the blood, such as menorrhagia, leucorrhœa, the discharge from a sinus connected with diseased bone, or from piles, hyperlactation, &c., are common causes of general debility.

7. *Grief, anxiety, and other depressing emotions*, especially when of long duration, predispose to certain constitutional diseases, such as tubercle and cancer.

8. *Fatigue* from excessive and prolonged exertion of mind or body, with deficient sleep, tends to induce general debility, as does also

9. *Protracted hot weather*, with little of the invigorating influence of occasional reductions of temperature; and

10. *Previous diseases*, whether acute or chronic, such as fevers and dyspepsia.

Some of these causes are prone to affect particular organs—as heat, the liver and digestive mucous membrane; and excessive mental exertion or depressing emotions, the brain; but there is no one organ or texture that is uniformly affected, nor any one kind of diseased action that is uniformly excited by any of the above causes. Certain diseases, however, known as *constitutional*, may be gradually developed in the body under the influence of some of the causes above enumerated, without the operation of any exciting cause. In fact, what are the predisposing causes of disease under ordinary circumstances, become here the exciting causes. The development of tubercle, as the result of deficient nourishment and habitual inhalation of impure air; of scurvy, from the long-continued use of innutritious, and especially of salted, food; and of gout, from the habitual ingestion of malt liquors and animal food in excess, are familiar illustrations.

B. Among the Exciting causes of disease, the following deserve special mention.

1. *Peculiar poisons*, which are designated *morbid*, inasmuch as they give rise to well-marked diseases, such as small-pox, scarlet fever, hydrophobia, and syphilis, which poison the constitution as certainly as a dose of hydrocyanic acid or opium. The origin of morbid poisons is to be sought for in one of two sources—either in certain emanations from the earth, or from dead and decomposing organic matter, or in the exhalations or secretions of living persons already suffering from the same disease. In the former case the disease is said to be due to *malaria*, in the latter to *contagion*. Intermittent and remittent fevers originate in the former way; scarlet fever and small-pox, in the latter.

2. *Chemical poisons or irritants*, whether swallowed, introduced by inhalation, or absorbed through the skin. Illustrations are furnished by the diseases to which workers in arsenic, lead, mercury, or phosphorus, are liable.

3. *Mechanical injuries or irritants*, in the form of wounds or foreign bodies. We have examples in the pulmonary diseases of masons, and of needle-, fork-, and razor-grinders, and also in intestinal worms and other parasites.

4. *Irritating or unwholesome articles of diet*, as mere excess in eating or drinking, which may act directly upon the digestive organs, or indirectly, as when they induce a fit of asthma or of gout.

5. *External heat*, of such a degree as to destroy the part to which it is directly applied, or sufficient to paralyse the sympathetic nervous system, as in insolation or sunstroke.

6. *External cold*.—Although the conventional cause of many diseases for which it is in no way to blame, there can be no doubt that cold, or a chill, operates in different ways as an exciting cause of disease. When excessive and prolonged, it destroys the vitality of the part, as in frost-bite. More commonly it acts by suppressing the natural functions of the skin, and thus inducing congestion, which may pass into inflammation, of various internal organs, but particularly of the lungs, bowels, or kidneys. It is important to remember that there exists no direct relation between the degree of cold, as measured by the thermometer, and its injurious effects in arresting cutaneous transpiration. Many of the diseases of summer, or of tropical climates, are really due to a chill.

7. *The sudden suppression of habitual evacuations* may cause congestion or inflammation of any internal organ predisposed to disease. As already stated, this is the way in which cold mainly acts. But like results may ensue from the sudden suppression of the catamenia, of the bleeding from piles, of epistaxis, or of the discharge from a *fistula in ano*, or from an eczematous scalp.

8. *Excessive hæmorrhage or other evacuations* may seriously impair, or completely suppress, the action of the heart.

9. *Excessive muscular exertion or straining* may develop emphysema, or may rupture a muscle, or the heart, or some blood-vessel. In the last case, if the rupture be complete, there is instant hæmorrhage; if incomplete, it may result in aneurism.

10. *Sudden and severe mental emotions* may induce diseases of the brain or nervous system, or of the heart, in persons already disposed to them.

III. *Morbid Anatomy and Chemistry*.—No department of medical research has made greater progress of late years than pathological anatomy; none has contributed more to place medicine on a scientific basis, or to lay the foundation for a rational system of treatment. Under the head of pathological anatomy and chemistry, is included the study of those changes in structure appreciable by the naked eye, or revealed by the microscope, which are the results or the causes of disease, and of those changes in the composition of the solids and fluids which are made known by chemical manipulation. Certain diseases are characterised by constant and well-marked lesions, to which the symptoms and the fatal termination are immediately due. Of this nature are the various local inflammations and the obstruction from any cause of the valves of the heart, or of the intestinal tube. A second class is distinguished by alterations in the solids or fluids of a more general and less definite character, such as we find after death from those diseases which are induced by morbid poisons; while in a third class we have hitherto succeeded in detecting no alteration of structure or chemical change. Diseases in which there are well-marked anatomical lesions are spoken of as *organic*, and those in which no lesion can be discovered as *functional*. It is very probable, however, that even in functional and so-called "*nervous*" diseases there are organic changes which our present means of investigation are too coarse to measure, or which cease with life, such as the condition of the capillary vessels which is believed to determine an epileptic seizure.

But, notwithstanding the great results already obtained by researches in pathological anatomy, and the still greater discoveries to which such researches may lead in the future, care must be taken not to overestimate their importance. The pathological anatomy of a disease must

not be confounded with its pathology. Many important diseases have no morbid anatomy with which we are acquainted; in others, and perhaps in far more than is commonly supposed, the lesions found after death are the result, rather than the cause, of the morbid process; and even when the disease has a purely local origin, it must be borne in mind that the alterations of structure and chemical composition found after death usually represent the *last* stages only of the morbid process, and, in common with healthy tissues, have undergone those all-important alterations consequent on the mere transition from life to death. It is to be feared that the study of pathological anatomy and chemistry has had the effect of making many medical men of the present generation overlook those inappreciable *vital* changes, more especially of innervation, which we know to exist wherever there is inflammation or other abnormal action within the body, and which modify the progress and greatly determine the ultimate event in all fatal diseases. In this way we account for what is a matter of almost daily observation, that patients recover from an amount of local disease (*e.g.*, pneumonia or peritonitis) very much greater than what is found after death in many fatal cases. The varying powers of vital resistance in different persons also account for the differing effects of a specific poison, such as that of scarlatina.

IV. *The Symptoms* of a disease are those deviations from normal structure or function, or alterations of the secretions, by which its existence is made known during life to the patient himself or to others. Certain symptoms, such as pain and numbness, are appreciable by the patient alone; while others, such as acceleration of the pulse, increase of temperature, and jaundice, are equally apparent to the medical observer. The former we designate "subjective" symptoms; the latter "objective" symptoms. The objective symptoms are unquestionably the more important. Subjective symptoms may deceive alike the patient and the physician as to the real nature of the patient's condition. The feeling of chilliness of which a patient complains during the cold stage of ague, or in the rigors of pyæmia, is calculated to make not only him, but those around him, imagine that the temperature of the body is *below* the normal standard, whereas the objective evidence of the thermometer shows that it is actually increased. The intrinsic value of subjective symptoms will vary according to the truthfulness, the emotions, and the descriptive power, of the patient. Whenever there is reason to suspect that he may have a motive in deceiving, we must trust mainly, if not solely, to objective symptoms. At the same time, it is necessary to keep in mind that the commencement of many serious diseases is indicated by subjective phenomena alone. Of late years, the practical tendency has, perhaps, been too much to ignore these subjective symptoms, and to pay too little attention to complaints which cannot be seen, or demonstrated by means of the stethoscope, microscope, or thermometer.

Most symptoms taken individually are common to many diseases, and only point to a particular malady when they occur in groups. When thus grouped, they become *signs* of certain diseases. Symptoms are appreciable by all persons alike, by the nurse as well as by the physician; but signs are such to medical eyes alone. "Symptoms," says Sir Thomas Watson, "may be considered as resembling so many words. When taken separately, or when put together at random, the words have no force or signification. Arrange them in due order, reduce them into a sentence, and they convey a meaning. The sentence is a sign or expression of something which is thus revealed. Symptoms become signs when their import can be interpreted." By many medical writers, however, the term *signs* is employed in a different sense, to indicate some obvious physical change, in contradistinction to some disordered function. Thus, in the case of pneumonia, cough and dyspnoea are spoken of as *symptoms*, whereas dulness on percussion of the chest, tubular breathing, and crepitation are described as *physical signs*. It is the practice to restrict the term physical signs to those indications of disease furnished by auscultation and percussion; yet most of those symptoms already referred to as *objective*, are in reality physical signs.

Although a combination of several symptoms is usually necessary to determine the precise nature of a malady, there are certain symptoms which are said to be *pathognomonic*, because alone they point with certainty to a particular disease. General febrile symptoms are common to small-pox, measles, scarlet fever, and typhus; but the cutaneous eruption in each of these diseases is absolutely pathognomonic.

Another circumstance to remember is, that the symptoms of the same disease vary at different stages of its course. It is always of great, and sometimes of paramount importance, to determine accurately the history of an illness before the patient has come under observation, and the precise stage it has reached at any particular time. Diseases are either *acute* or *chronic*. The former run a rapid, and for the most part, a definite course. Within a given time, they either kill the patient, or

terminate in recovery; and hence not only the symptoms themselves, but their value in reference to treatment and prognosis, will vary according to the stage of the malady. The course of chronic diseases may extend over months or years, and may also be marked by great changes in the symptoms, although these changes are more gradual, and therefore less obvious.

Again, the symptoms of a disease may be modified by many accidental circumstances, and even by the remedial measures adopted. No opportunity ought to be lost of studying the "natural history" of diseases, or their symptoms, course, and mode of termination, when not interfered with by medical art. It is only by such knowledge that the action of remedies can be properly determined. Not only the general public, but medical men themselves, are apt to attribute to remedies effects which are really the result of the disease taking its natural course. If the result be favourable, the remedy is credited with that to which it is not fairly entitled; but, if unfavourable, the medical attendant is often unjustly blamed.

Here it may be well briefly to refer to the principal ways in which diseases terminate in death. Death has been said to begin at one or other of the three vital organs—the heart, the lungs, or the brain; but when you remember the intimate dependence upon one another of these three organs, you must see that the above distinction is an arbitrary one, and in practice it is often difficult to decide which of the organs in question has contributed most to the fatal event. Still it is always important to keep in mind the most natural tendency to death in each disease; and it may be said, as was long ago taught by the late Professor Alison of Edinburgh, that all diseases terminate fatally, either by suspending the heart's action, or by interfering with the function of respiration. In the former case, death is said to be due to *syncope*; in the latter, to *suffocation*, or *asphyxia*.

A. *Syncope* may be induced in one of two ways: first, by a deficient supply of blood to the heart, which may occur suddenly from copious hæmorrhage, or more slowly from whatever interferes with the proper supply or assimilation of food; or, secondly, by a suspension of the contracting power of the heart, as happens in pericarditis, peritonitis, and certain forms of poisoning. In the former case death is said to take place by *anæmia*; in the latter, by *asthenia*. In both anæmia and asthenia, the heart's action is suspended through paralysis of the brain or nervous system; but in anæmia the nervous system is paralysed in consequence of a deficient supply of blood sent to the brain from the heart; whereas in asthenia the brain or nervous system is the part first affected.

a. Dying by *anæmia* is characterised by a slow, weak, and often irregular pulse, paleness of the countenance and lips, coldness of the extremities, and cold sweats, dimness of vision, dilated pupils, nausea, vertigo, restlessness, irregular sighing or gasping respiration, and ultimately insensibility, with or without convulsions. After death, the heart is usually found to be quite or nearly empty, and contracted.

b. When death occurs by *asthenia*, the pulse is quick, feeble, or imperceptible; the extremities are cold; and the surface covered with a clammy sweat. There is extreme muscular debility; and, though the patient is often listless and apathetic, the intellect remains clear to the last. After death, the right cavities of the heart are found to be full of dark purple blood, while the left are distended with bright red blood.

Not unfrequently, as in starvation and in many wasting diseases, death takes place by a combination of anæmia and asthenia.

B. *Suffocation* or *Asphyxia* results from imperfect aëration of the blood. It may occur in three different ways. First, it may be due to some impediment to the entrance of air into the lungs, as in drowning, strangulation, oedema of the glottis, croup, and various diseases of the pulmonary tissue itself. The conversion of venous into arterial blood in the pulmonary capillaries is arrested, while the impure venous blood circulating in the arteries paralyses the nervous system, and thus impairs the general sensibility; and it is supposed that the circulation through the lungs is ultimately brought to a standstill, in virtue of a firm contraction of the muscular fibres in the minute branches of the pulmonary artery excited by the chemically impure blood. This is death by *apnoea*. Or, secondly, the nervous system may be primarily at fault, and then death is said to occur by *coma*. In consequence of some structural disease in the brain, or of the circulation through that organ of impure or poisoned blood, as happens in uræmia and various specific fevers, a state of stupor, or insensibility to external impressions, is induced; the medulla oblongata, and through it the nerves of respiration, are paralysed; the respiratory movements are embarrassed, and at last entirely cease; so that the blood is no longer aërated, and similar consequences ensue as in death by apnoea, but with this difference, that the mechanical movements of respiration suffer before its chemical functions, and that the brain is affected before the lungs. Coma, in fact, bears much the same relation to apnoea that asthenia

holds to anæmia. A third mode of death commencing in the lungs is that by *embolism*. A fibrinous clot formed in the right side of the heart, or brought from a distant vein, is carried into the pulmonary artery, and at once more or less completely arrests the circulation in the lungs. The result is the same as when the supply of air is cut off from the lungs. In both cases the tissues of the body suffer from the want of oxygenated blood. The phenomena observed in these three modes of death commencing in the lungs are as follows.

a. In *apnoea*, the respiratory movements are quickened and laboured: the auxiliary muscles of respiration are called into powerful action, the countenance is swollen and livid, the eyeballs protruded, and the veins of the head and neck are distended, and before long there is loss of consciousness, very often with muscular twitchings or general convulsions. The heart and arteries continue to beat after the breathing has ceased; and after death the right cavities of the heart are found to be distended with dark blood, while the left are empty.

b. In *coma*, the final phenomena are much the same as in *apnoea*, but there is this difference, that the loss of consciousness precedes the difficulty of breathing; and that in consequence of the impaired sensibility, the respirations become slow, irregular, and stertorous.

c. In *embolism*, when the trunk of the pulmonary artery is suddenly blocked, death is instantaneous; but when the obstruction is less complete, the patient may survive for several hours, and the phenomena observed are extreme dyspnoea coming on suddenly, and conjoined with pallor and faintness.

This tabular arrangement which I place before you may help to impress upon your minds the different modes of dying which I have now described.

A.—SYNCOPE.

Death commencing in the heart.

a. *Anæmia*.—Deficient supply of blood to heart.

b. *Asthenia*.—Suspension of contracting power of heart.

B.—ASPHYXIA.

Death commencing in the lungs.

a. *Apnoea*.—Impediment to entrance of air into lungs.

b. *Coma*.—Impaired nervous sensibility, embarrassing the movements of respiration.

c. *Embolism*.—Stoppage in supply of blood to the lungs.

[To be continued.]

ANTISEPTIC TREATMENT OF SMALL-POX.

IN common with many readers of the BRITISH MEDICAL JOURNAL, I have perused with much interest the account by Dr. Hjaltelin (in the number for Nov. 4th) of small-pox occurring in Iceland, and especially of the control exercised by sulphurous acid in gas and solution over the course of that disease, as well as over vaccinia. It appeared to serve for prevention and treatment. The views of Dr. Polli, the Milanese professor, are singularly confirmed by this independent observation. The adoption of the treatment seems not at all inspired by his advocacy, nor is it defended by his *rationale*. In the preparations or medicines employed by Dr. Polli, it is always the sulphurous acid element that he insists upon; and in their therapeutic action, as conceived by him, there is a perfect identity of operation between the sulphites and the acid—that is to say, in arresting fermentative change. Nay more: in those frequent instances where sulphur is proved to be of use, whether in vine or silkworm disease, or in the diseases of man and animals, he attributes all to the oxidation of the sulphur and slow development of sulphurous acid. There are some things which render his notion of cure and prevention in zymotic disease far less preposterous and extravagant than it might at first appear to men of great experience. One of these I will mention, as it occurs to me. In the early days of vaccination, and at the hands of early vaccinators, it was found that the action of sulphur on the frame was decidedly adverse to the receptivity of vaccine. A well known dissertation was written on this very subject by Dr. Tierney, in which there is found quoted the fact that Dr. Jenner had failed in vaccinating thirty soldiers, all under treatment by sulphur. "When they were vaccinated two or three weeks afterwards, they all of them took the genuine cow-pox." I have not Tierney's book before me, nor have I time to look for it; but I quote from the better known work of George Bell (Edinburgh, 1802, *Treatise on Cow-pox*), where the subject is fully mentioned.

Let us, then, not wholly discard the idea that we may find in the sulphites and hyposulphites valuable prophylactics and curative agents against zymotic disease. These facts, beyond dispute, are highly suggestive for experiment.

GEORGE GASKOIN.

CLINICAL REMARKS ON SO-CALLED HAY-FEVER OR SUMMER CATARRH.

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I WISH to call your attention to an affection of which you will probably see no instances in our wards, but which you may meet with hereafter in your practice. I mean hay-fever, or summer catarrh. Whether it has been in consequence of the peculiar weather which we have had, or some other cause, I am unable to say; but certainly the affection has appeared to me unusually prevalent this year; and, as I have myself suffered from it somewhat severely, I propose to say a few words on its nature and symptoms, and on my experience in its treatment.

Some people are apt to smile when you tell them that you have suffered severely from the malady; they seem to imagine that it can be nothing more than an ordinary cold, for which little sympathy is needed. But it is not an ordinary cold; it is a specific affection, brought on and kept up by peculiar causes, only affecting a certain number of people, always or nearly always affecting them in the same way, and at very nearly the same period every, or almost every year.

The term hay-fever is not a good one; for the malady is not simply produced by the effluvia of hay, although there is no doubt that these will suffice in many people to bring on an attack. I believe that emanations from various flowering plants, including the grasses, are far more concerned in the production of the affection than the hay itself. But there are other causes which may either produce the disease or keep it up; viz., certain atmospheric conditions—conditions, indeed, very opposite to each other—warmth and moisture on the one hand, and hot, dry, bright weather, on the other. I believe, however, that when the weather is moist and warm, the disease will attack more individuals than when it is dry, accompanied by great heat or otherwise.

Now let me remind you of the kind of weather we have had this summer.* June was very cold and dry in its early part. Towards the end, we had a sudden change; and ever since we have had great moisture, with, especially in the early part of the present month, a good deal of warmth.

The disease occurs in two different forms—a milder and a more severe form. I include under the milder form those cases where sneezing, coryza, lachrymation, or asthmatic attacks, are brought on by exposure to hay or flowers. I have now a gentleman under my care for a chest-affection, who gets an attack of sneezing, lachrymation, etc., whenever he goes near a hay-field. This has happened to him every summer as long as he can recollect. The attack with him soon passes off, and he can avoid it by avoiding the cause. Some people get real asthmatic attacks from being in the neighbourhood of hay. A lady of my acquaintance suffers very severely in this way; and she is obliged to go to the seaside to avoid her enemy; and the more barren the surrounding country, the better.

These mild attacks, however, are not the only form of this affection. There is a severe form; and it is, unfortunately, of this latter that I have had actual personal experience. Although the affection cannot be said to present any element of danger, yet it is something more than unpleasant and annoying. The catarrhal symptoms are sometimes very severe, and occasionally attended, as in my case, with unmistakable bronchitis. Moreover, the disease is very depressing. The depression is not so sudden nor so great as that attendant on influenza; but it is sufficient to incapacitate the sufferer for all the enjoyments of life, and to render work, either of mind or of body, very irksome. The appetite sometimes fails; food is not relished; the nights are often very disturbed; and the result is that, after the disease has lasted a few weeks, the sufferer from it has lost flesh, looks haggard, sallow, and anæmic. No wonder, then, that we hear of people attempting to dodge their enemy—i. e., changing their residence, so as to avoid the hay-season. The affection cannot always be escaped even by this process, for the atmospheric conditions which give rise to it cannot always be avoided.

My first experience of the disease was in 1866, when I was staying at the seaside; and perhaps you will be inclined to ask how I could possibly have had an attack there. It happened in this wise. I used to take long journeys into the country; and, although the hay-season was nearly over, there were plenty of flowering plants. I used to find, on

* These remarks were made at the end of July of the present year.