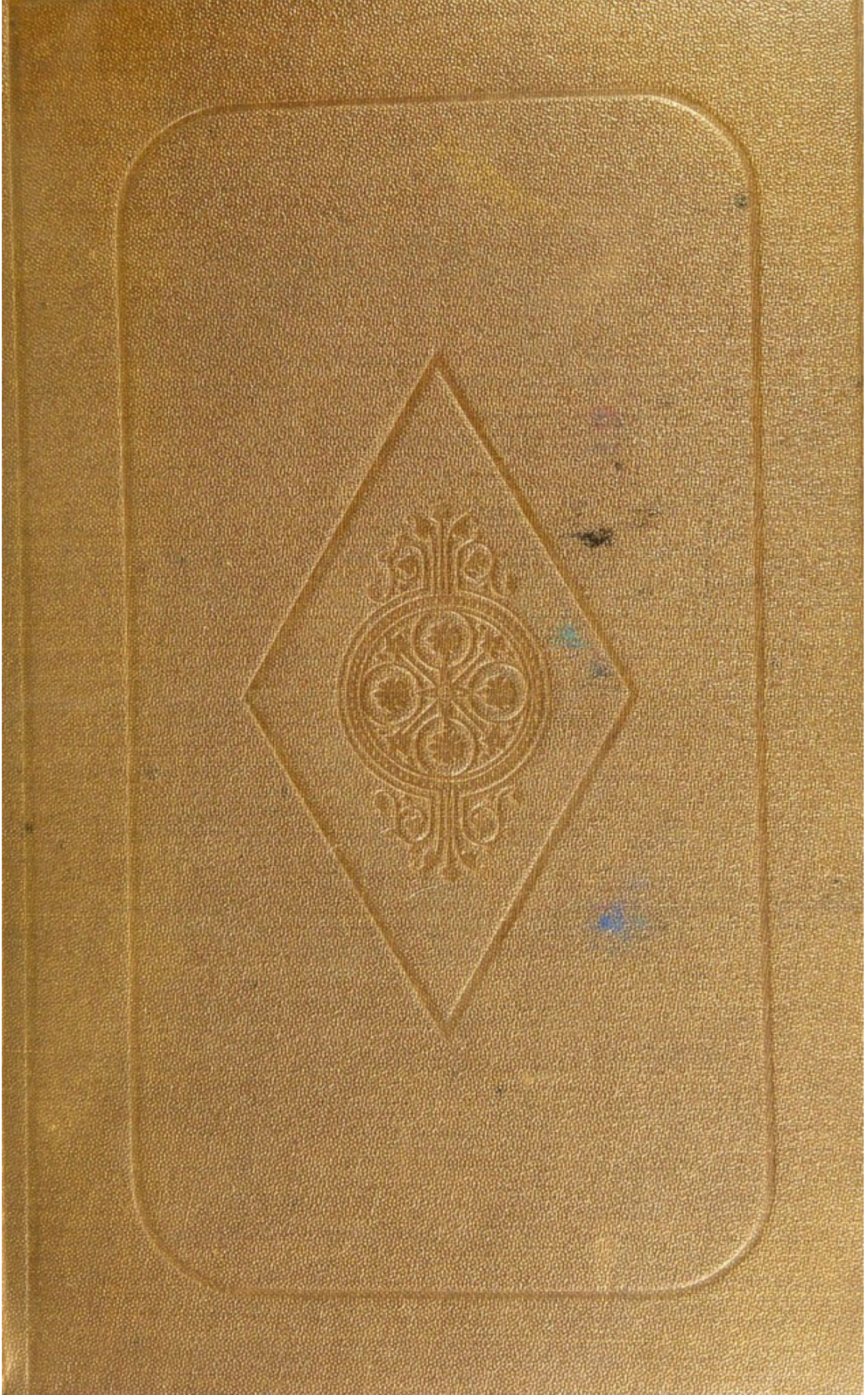
A manual of the pathology and treatment of ulcers and cutaneous diseases of the lower limbs / by John Kent Spender.



PATHOLOGY AND TREATMENT

OF

ULCERS AND CUTANEOUS DISEASES

OF

THE LOWER LIMBS

A MANUAL

OF THE

PATHOLOGY AND TREATMENT

OF

ULCERS AND CUTANEOUS DISEASES

OF

THE LOWER LIMBS

BY

JOHN KENT SPENDER, M.B. Lond.
Surgeon to the Mineral Water Hospital and to the Eastern Dispensary
Bath

LONDON
JOHN CHURCHILL & SONS, NEW BURLINGTON STREET
MDCCCLXVIII.

PRINTED BY J. E. ADLARD, BARTHOLOMEW CLOSE.

PREFACE.

FILIAL piety and literary justice dictate that my earliest acknowledgments should be made to a work written and published by my father in 1835, entitled 'The Pathology and Treatment of Ulcers of the Leg.' This work is, in part, the basis of the book which I now offer to the profession; and the portions which I have specially made use of and endorsed are two in number.

Firstly, the argument that ulceration of the leg does not come from a natural imperfection in the limb, but from a fault or weakness to which its vascular structures are liable. This argument was originally developed with singular logical force and perspicuity; I have not attempted to add to the completeness of the exposition, but I have rewritten the language in which it is conveyed Secondly, the proposal to treat the ulceration by imitating the natural process of healing by scabbing, which can be done by using a particular form of ointment; and I have attempted to explain and illustrate this proposal by reference to the Surgical pathology of our own day.

So strange and almost droll are the oscillations of pathological doctrine, that whereas it was thought necessary thirty or forty years ago to establish with elaborate

proofs the dependence of ulcers of the leg on varicose veins, in reply to the sceptics of the beginning of this century; the reiteration of those proofs has become necessary from the fact that the doctrine has been again assailed within the last few months. Once, it was not believed because it was not thought of; next, it was incorporated with all orthodox medical creeds; and finally, at the present time it is criticized and repudiated by no mean authority. I have ventured to reassert the facts connected with this question which are satisfactory to authors of the highest repute, and which appear to place it upon a basis difficult to controvert.

Another chapter of my father's work, which I have transcribed with several additions and omissions, is on the safety and propriety of curing ulcers of the leg.

All the rest of this book is now published for the first time. It includes more particularly the classification of ulcers, and the special treatment of each kind; the hindrances and difficulties in their management; and the chapter on cutaneous diseases of the lower limbs.

I have not touched at all on the subject of malignant disease. For ulceration is, so to speak, merely an accidental (though often unavoidable) phase in its history; and the ulceration cannot be treated apart from that history, which is very wide and complex indeed. And there is nothing in the treatment of malignant ulcer of the leg which distinguishes it from the treatment of malignant ulceration elsewhere. Cancer, in all its shades and grades, ought never to be discussed in a narrow and partial way.

It is easy to cram a monograph of this kind with a great number of cases, all cut and dried like diagrams, and

telling the same story of unvarying success. A few striking cases are introduced in the following pages, either as illustrations of principles which I desire to enforce, or as examples of treatment which seems to be most judicious and wise. They serve as texts for my discourse, and are certainly more impressive than philosophy and advice communicated in an abstract form.

During a practice of more than sixteen years I have gathered (almost involuntarily) a large collection of facts bearing on the subject of this book; and I now submit them to the profession with the hope that they may be judged with readiness and candour.

J. K. S.

Bath; *May 5th*, 1868.

CONTENTS.

CHAPTER VII.

CHAPTER VIII.

CHAPTER IX.

CHAPTER X.

PATHOLOGY AND TREATMENT

OF

ULCERS AND CUTANEOUS DISEASES.

CHAPTER I.

THE CAUSES OF ULCER OF THE LEG.

The leg suffers from ulceration much more often than other parts of the body. This used to be explained by referring to their dependent position, or to their remoteness from the heart; and rather recently, indeed, a writer of some note observes that the "reason why ulcers are more frequently found in the lower extremity than in any other part of the body, and are more difficult to heal, is on account of the weight of the superincumbent column of blood weakening the vessels, and impeding the circulation through the parts."[1] But the direction and locality of the limbs are natural conditions, and, therefore, to say that these tend to produce mischief, implies some original defect in their construction. In other words, the doctrine is seriously maintained that the natural liability of the healthy structures is to evil.

[1] Mr. Critchett in the 'Lancet,' October 7th, 1848.

Now, in the first place, this opinion is rebutted by the daily facts of life. One person may have a spontaneous ulcer on the leg, but for every such instance perhaps twenty other persons have never experienced such a thing. Two people, of the same age and enjoying similar general health, may receive an injury of the same severity on the same part of the leg: in the one case the injury may mend itself, possibly even in opposition to injudicious treatment; while in the other, the greatest care bestowed on the local accident may not prevent it from becoming a troublesome ulcer. Now, the lower limbs of each of these persons are equally dependent, and equally far from the heart; and, consequently, if one or both of these conditions rendered them liable to evil, the results ought to be the same in all. It is clear, therefore, that we must search for some other cause to explain the fact that the leg is more liable to ulceration than other parts of the body.

Now, what are the real causes of this acknowledged fact? It is necessary to obtain clear views on this point, in order to arrive at sound principles for governing our treatment. Our therapeutics will be complex, and may be sometimes even contradictory, so long as our pathology is vague and unsettled.

Two circumstances help to explain the great frequency with which ulcers of the leg occur.

a. The manner in which the lower limbs are exposed to injuries by the infliction of blows, and by the effect of falls. These accidents are, however, commonly trifling enough, and would be, as a rule, of no great importance if it were not for some condition peculiar to the limbs themselves.

b. This condition is a degeneration, or malnutrition, of the dermal and sub-dermal structures; of the skin and subjacent connective tissue. And this arises, in a large number of cases, from the existence and progress of varicose veins.

But perhaps it will be said that, even conceding the truth of this opinion, yet the varicose disease itself results from the dependent position of the limb, and its remoteness from the heart; and therefore the tendency to ulcers might be referred back with strict correctness to these anterior causes. To this it is to be replied that, as the doctrine of any original liability to ulcer in the leg more than in any other part of the body has already been disposed of, it is evident that this disease of the veins must be owing to some mechanical interruption to the flow of the blood, or to some weakness or degeneration in the coats of the vessels.

It is a fundamental axiom of life that for every extraordinary arrangement of anatomical structures, an extraordinary provision has been made for keeping those structures in the healthy exercise of their proper functions. It is natural for the blood in the jugular veins to flow downwards, and it is just as natural for the blood in the saphena veins to flow upwards. Now, as the physical law of gravity is stronger than the dynamical laws which govern the circulation, a special valvular apparatus is introduced into the veins of the lower limbs in order to meet a special exigency; and in a state of complete health the special obstacle is exactly met by the special power designed to overcome it. But if we admit that the "weight of the superincumbent column of blood weakens the vessels, and

impedes the circulation through the parts," it is equivalent to asserting that the provision which Nature has made does not fulfil the purposes for which it was intended; consequently, the veins of all legs ought to be varicose, for all legs hang down, and all legs are far from the heart.

Still, the position of the leg may make it more *susceptible* to the agency of those causes which produce varicose veins; and it may help to *perpetuate* this evil when once developed. By the susceptibility I mean that the forces which carry on the circulation of the blood are readily disturbed; and the difficulty of rectifying this disturbance may make the evil chronic, perhaps irremediable. It is the combined result of these causes which explains the greater frequency of varicose veins in the lower extremity when compared with the upper. The physiological anatomy of every part of the body influences its pathology, and confers upon it special marks: but we cannot logically say that the one causes the other, for this is the same as declaring that Nature is faulty or imperfect.

The pathological fact before us, then, is an ulcer of the leg. This is of four kinds: (*a*) the varicose ulcer; (*b*) the syphilitic ulcer; (*c*) the scrofulous ulcer; (*d*) the traumatic ulcer.

The *varicose ulcer* is the most common, and demands the earliest attention.

CHAPTER II.

THE VARICOSE ULCER.

Discussing the subject in the order of causation, I have to consider, first, the derangement of the circulation, which constitutes varix, or varicose veins; showing how a diseased condition of the venous channels induces disorganization of the superficial parts, and how these causes co-operate to bring about the peculiar proneness of the leg to ulceration.

The textural anatomy of a vein is qualitatively identical with that of an artery, but quantitatively it differs in some important points. The elastic element (yellow fibrous tissue) of the middle coat is imperfectly developed; and the unstriped muscular fibre exists in far less quantity. Now, the patency of an artery after death arises from the physical property with which it is endowed by its elastic coat; this property being wholly independent of vital control. The absence of elasticity in veins explains the readiness with which these vessels collapse; but the very same circumstance imparts to a vein a tendency to unnatural dilatation, under the operation of an adequate cause; for elasticity is essentially a property of *resistance,* enabling a structure to oppose a barrier to permanent change of dimension. Hence, in the event of any lesion affecting the valvular apparatus, and impairing

its functions, or any morbific agent developing itself in the blood, and impeding its flow, the result is a dilatation of the vein, which is proportionate to the relative deficiency of elastic material.

Phlebectasis (the generic term under which writers treat of varicosity of veins) consists, therefore, in an enlargement of the caliber of the vessels, and may or may not be accompanied by an alteration in their coats. Briquet[1] avails himself of these differences for establishing his classification. He assumes three varieties: (*a*) simple dilatation; (*b*) uniform dilatation, accompanied by thickening of the coats; and (*c*) irregular dilatation, with thickening or attenuation. Thickening of a vein is owing to an inflammatory action in the areolar or outer tunic, causing plastic effusion, which eventually becomes consolidated and hardened; thinning of a vein is due to a mere mechanical stretching of the whole venous wall. The alteration in the one case is pathological, in the other only physical; but it is obvious that both conditions may exist in the track of the same vessel.

Now, anything which produces unequal pressure on the track of the veins acts as an impediment to the flow of the blood. Mechanical pressure on a vessel creates varix on its distal side, as we see in utero-gestation with regard to the femoral and saphena veins. Any unhealthy state of the coats of a vessel, enfeebling their tone, retards the onward course of the blood, and causes it to accumulate

---

1 "Histoire des Inflammations," quoted in Jones and Sieveking's 'Pathological Academy,' p. 370. Briquet's classification is simpler than Andral's.

in the tube. The vein becomes convoluted and elongated, in order to accommodate its area to the increased quantity of blood that fills it; each convolution and elongation offering additional hindrance to the progress of the circulating fluid, so that the vessel becomes still further weakened, and its coats secondarily diseased. Then it is obvious that, as the valves of a vein are only processes of the innermost membrane, dilatation of the entire venous channel must produce separation of the segments of each valve; and consequently another element of delay is added to those already in existence.

Certain changes take place in the blood contained in varicose veins. Brodie remarked that the blood always has a tendency to coagulate; and the vessels may become choked up with the coagulum. There seems to be something in an inflamed vein which is unfavourable to the fluidity of the blood circulating in it.[1] The coagulum may even fill up a vein so as to obliterate it; but Hodgson says that the deposit does not generally fill the vessel, but, by diminishing its caliber, it retards the flow of blood, and causes the dilatation to increase in the inferior portion of the vein, and in the branches which open into it.[2] Here, then, is another obstacle which enhances, in a geometric ratio, the difficulty of the function of the vessel being restored.

Hasse asserts that the occurrence of phlebectasis is connected with a peculiar state of constitution, which he

---

[1] "Observations on the Treatment of Varicose Veins of the Leg," in 'Med.-Chir. Trans.,' vol. vii, p. 195.

[2] 'On Diseases of the Arteries and Veins,' p. 541.

terms a morbid predominance of the venous system—a venous habit of the body, and which is associated with a tendency to local congestions. Possibly the fact might be better expressed by saying that, when the nutritive energies are sluggish and imperfect, the "vis à tergo" propagated by the arteries becomes checked and neutralized in the capillaries, and hence a general stagnation of blood occurs in the venous channels.

In Holmes's 'System of Surgery' there is the best account with which I am acquainted of the development of varicose veins in the leg; and I have verified the accuracy of every detail. Persons who suffer from varices of the leg usually complain, some time before the external manifestation of the disease, of a deep aching pain in the limbs, with a sense of weight, fulness, and fatigue. In a more advanced stage of the disease the ankles swell after a day's hard work, and the feet are constantly cold. An embarrassed state of the circulation is denoted by these symptoms; and the deep-seated veins begin to swell as a result of the static difficulties of the blood. After a time (which varies with the idiosyncrasy and occupation of the patient) small, soft, blue tumours are seen at different points in the leg; most of them will disappear on pressure, but will return when the pressure is removed, or when the patient stands up. Each little tumour is caused by a vein dilating at the point at which it is joined by an intramuscular branch. Around many of the tumours a number of minute vessels are clustered, of a dark purple colour, these being the small superficial veins which enter the dilating vein, and in which the passage of the blood is retarded. An increasing length of vein becomes gradually

involved, and a number of irregular, knotty, convoluted tumours are developed, grouping themselves around the points at which the dilatation first began. The external and internal saphena veins are those principally affected, but long tracks of tortuous veins may extend up the leg and thigh. Dangerous and even fatal hæmorrhage may ensue from the bursting of a varix through the skin. The vessels may become filled with clots, and permanently obstructed; and ulceration and disease of the skin are some of the most common pathological sequels.[1]

Now, it is this ulceration and disease of the skin of the leg which we have particularly to consider. Let me sketch the subject first. The connective tissue, composing the true cutis, suffers compression from the enlarged veins, and its interstices become infiltrated with thickened serum; general œdema is the natural consequence, which is sometimes accompanied by a quasi-erysipelatous inflammation of the skin. Amussat says that the lymphatic vessels adjacent to varices are considerably dilated, and hence the absorptive function must be impaired. Other changes occur in the dermoid structures. The layers of the cuticle proper become hypertrophied and hardened, sometimes to so great an extent as to obscure the track of the varicose vessels. But occasionally the distended veins are so superficial that they coalesce with the layers of the cuticle, and so attenuate it that the thinnest possible partition separates the vascular current from the external surface; and more or less pain is usually complained of.

---

[1] 'System of Surgery,' vol. iii, p. 314. The article on Diseases of the Veins is by Mr. Callender.

Here, then, we find a notable impairment of the functions of innervation, absorption, and nutrition; and the general result of all these morbid processes is, that the limb becomes metamorphosed into a swollen and shapeless mass, a troublesome and misshapen appendage, requiring some skill and labour to drag it from place to place, instead of being itself subservient to the locomotive office. Ought we to wonder that such a degenerate leg is especially prone to ulcerative disease?

Further, the læsion of nutrition is the proximate cause of the ulcerative action. The capillaries become engorged with blood, and hence the assimilative changes are retarded, and sometimes altogether checked. Gradually the circulation is entirely arrested. The vitality of the superficial structures becomes permanently degraded; they are consequently unable to resist the effects of slight injuries, or even to sustain themselves from running into that "molecular death" which constitutes ulceration; and the same circumstances render them unable to repair themselves after a portion has been destroyed, and an open sore established.

As there is no fact more susceptible of logical proof than the dependence of ulcers on varicose veins, as effect upon a cause, we can hardly understand such a distinguished writer as the late Mr. B. Bell speaking of varix as a mere *symptom* and *effect* of the ulcer.[1] And yet it is only the careful investigation of pathological principles which can elucidate the true sequence of morbid phenomena, and establish the particular rela-

---

1 'Treatise on Ulcers,' p. 255.

tionship which links together two or more co-existing conditions.

The *characters* assumed by varicose ulcers are of less importance than a distinct recognition of their cause, and are determined mainly by constitutional and local agencies. The two types most often assumed are respectively represented by the terms *irritable* and *indolent*. The irritable ulcer is generally found in persons of abundant health and strength; the indolent ulcer (which includes every kind of ulcer denoting depraved health) appears in persons advanced in life, or suffering from a special cachexia. Then the anatomical seat of these ulcers is different. The former is situated in the superficial layers of the skin, and is characterised by hyperæmia and pain; the latter extends deeply into the connective tissue of the cutis, and may involve even the fascia of the limb. But the former may become the latter, as the result either of inappropriate treatment or of any alteration in the vital energy of the system.

Varicose veins and obstructed veins are the remote causes of nearly every form of non-traumatic ulcer in the lower extremity. Note the frequency with which ulcers occur in different sexes and at different ages. Children and young adults rarely suffer from varicose veins, and they rarely have ulcers of any kind on the leg; and those which they get from injuries or falls nearly always do well with little or no treatment. An obstinately chronic ulcer of the limb, in a young person, can be traced usually to diseased bone, or to a congenital constitutional taint of a special kind. Of adults, too, men are much less liable to varicose veins than women; and they are found to be

proportionately exempt from ulcers on the leg, although their pursuits and employments render them more exposed to wounds from extrinsic causes. Women in the middle period of life are the most frequent subjects of varicose veins; and it is in this class of persons, though so little in peril from outward agencies, that ulcers of the leg are the most common and the most intractable.

A short review of the literature of this subject will show that it has been only in late years that the importance of varix of the lower limb has been recognised. Wiseman speaks of this condition of the veins as among the "accidental differences which are taken from those things not intrinsic to the nature and constitution of an ulcer."[1] The paragraph already quoted from Mr. B. Bell is the only instance in which he refers to the existence of the varicose condition in his whole book; and then he viewed it merely as a symptom and effect of the ulcer. Mr. Baynton, it is true, speaks of varicose veins "attending" two or three of the cases he has recited; and he likewise asks in another place whether one of the difficulties in curing ulcers may not arise from a deficiency of the absorbent powers of the veins in that variety of the disease attended with a varicose state of the vessels.[2] But he nowhere assigns the varicose affection as a cause of ulcers, neither was it with a view to sustain the action of the veins that he introduced the adhesive plasters. He supposed that the obstacle to be overcome, in attempting to permanently cure an ulcer, consists in a disordered state of the

---

[1] 'Chirurg. Treatises,' vol. i, p. 265.

[2] 'Descriptive account of a New Method of treating Old Ulcers of the Legs,' p. 41.

lymphatics, and that the general pressure on the limb acts beneficially on the ulcer by assisting their function. And in another part of his work he states that the principal difficulty in the cure of ulcers is occasioned by defective power in the absorbent vessels.

Dr. Underwood and Mr. Whateley have not once alluded to the existence of varicose veins in the leg as being a cause of ulcers, though they are both very able and strenuous advocates of pressure. The first of these writers has not even mentioned this condition of the veins in any part of his treatise; and the latter has incidentally adverted to it only once as being a state benefited by the use of the bandage, in common with some other advantages attending its use. He attributes all the blame to Nature for making our legs where they are. Both these writers systematically resorted to compression as the agent calculated to do the greatest good, though with no very precise idea as to the exact character of the evil with which they had to contend.

Among the older writers, Sir Everard Home has recognised the varicose state in connection with ulcers of the leg more than any other person who has treated of the subject. But then he speaks of this division of ulcers as being merely "attended" with varicose veins; and adds that "they have their origin from some accidental cause." Nor does Sir E. Home allude to that unhealthiness of the outer structures of the limb which is produced mainly by the obstruction in the veins.

More recently, the pathological dependence of ulcers of the legs upon varicose veins has been clearly laid down by Mr. Critchett. He enumerates five different ways in which

varix may terminate, each of which may be a forerunner of the succeeding stage, until the condition of ulceration is actually reached.[1] To Mr. Chapman, also, we are indebted for a concise exposition of correct views upon this subject; and in all the great systematic works on Surgery published in late years, we find that the pathology of this question is based upon sound principles.

Old people are liable to ulcers on the leg which cannot be classified in any obvious way, as there are often no distinctly varicose veins. But the legs are early subject to that vital and physical deterioration of tissue which is the first step in the process of ulceration, and which is the natural characteristic of senile decay. Large ulcers of an obstinate kind are apt to be developed in legs suffering from œdematous swelling; and the same result is the occasional sequel of a severe attack of "idiopathic" inflammation.

On what part of the leg are varicose ulcers most often found? Nearly always on the lower part. I shall speak by-and-by of the diagnosis which may be legitimately built upon the position of the ulcer; the question now is *why* do varicose ulcers occur so often in the lower part of the leg? Mr. Hilton[2] has rationally suggested one explanation, which is this:—The superficial and deep veins of the leg freely communicate with each other in the neighbourhood of the ankle-joint. The first two inches above that point is the spot where the greatest stress is laid upon these superficial veins; below that point they freely communicate, and, if the blood cannot return by the

---

[1] 'Lancet,' October 7th, 1848. [2] Ibid., September 14th, 1861.

superficial veins, it can do so by the deep veins, or *vice versâ;* but when we reach the point above the inner malleolus (where that brown patch of skin occurs in old persons) it is otherwise, and this appears to be the reason why ulcers from varicose veins occur so frequently about that neighbourhood.

Let the column of venous blood between the heart and the foot be represented by a straight tube; it is clear that the greatest pressure of fluid will be at the base of the tube. According to the principles already laid down, the static difficulties of the circulation of the blood are exactly met by the mechanical helps which Nature has provided; but if those helps be at any time annulled, the difficulties of stagnant venous blood will be seen most conspicuously at the lowest part of the column, and ulceration of the skin follows, as the natural pathological sequence, most readily about and above the ankle. This, then, is another reason for the position of the varicose ulcer.

But there is a nerve-element in the case which must not be disparaged or ignored. The pigmentary discoloration spoken of by Mr. Hilton represents a neurose derangement, leading, not to an exaltation of nutrition, but to a degradation of it. It is a local index of diminished physiological force. It is a sign of loss and waste in a circumscribed area of tissue, denoting early embarrassment and distress in the blood-changes; the cuticular epithelium is fed with a lower quality of hæmatine, and textural metamorphosis is less free. And this deviation from a normal state arises very much from a want of power in the vaso-motor nerves of the part affected: more or less they cease to preside over its nutrition, and they are

engaged in the same troubles which cause the stasis in the blood-vessels.

The form and extent of this patch of tegumentary pigment are worth attention. Most often it is, I think, seen as an ovoid mark extending from the inner malleolus at its lower edge, and having its long axis in a perpendicular direction three or four inches up the inside of the leg. Not unfrequently the pigmentary stain extends on the back of the leg in the line of the "tendo Achillis," and to a higher extent than on the inside. Now and then it surrounds the whole of the leg below the calf as a broad band of pale tint, and only very little darker than the neighbouring skin. As a rule, the smaller the patch the darker it is. It is seldom seen before middle life; and though usually a sign and note of varicose veins, it is sometimes present without any superficial varix being visible.

Moreover, this cuticular pigment has its practical interest. If at all intense, it leads to the suspicion of varicose veins, and ought to induce us to search for them. At the very least, it betrays a low organization of skin-structure; very often there is a shedding of white, dry, thick scales, which may even conceal a partial ulceration of the cutis, further masked, perhaps, by overhanging borders of hardened connective tissue. We are obliged to predict a tardy cure of any varicose ulcer which is complicated with this condition.

I have tried to delineate in the very foreground the pathological laws which determine the existence of varicose ulcers of the leg. They are strictly local ulcers. Every ulcer is either local in its source and in its consequences,

or else it is a local expression of a special blood disease. An ulcer dependent on constitutional causes is curable only by constitutional remedies, acting through the blood. Here we trace a local disease back to a general cause, and our practice is governed by this knowledge. In like manner all local ulcers should be traced back to their own local causes. If in the one case we prefix to an ulcer a generic term significant of the particular diathesis with which it is associated, why in the other should we not give prominence to the pathological fact on which the same læsion depends? Every nosological definition should express a cause, and suggest a remedy. But I fulfil only the latter of these conditions when I speak of a local ulcer being simply acute, or chronic, or healthy, or indolent; I say nothing about its origin. Clearly, therefore, any classification of local ulcers which does not take for its basis the presence or absence of varicose veins is philosophically defective, and therefore practically wrong. To classify ulcers of the leg according to their appearances only is merely to transcribe the manifestations of an evil, and not the evil itself.

It is possible, therefore, to arrange all ulcers of the lower limb under two orders, determinable by the existence or non-existence of phlebectasis. Each order may embrace the specific distinctions arising from the superficial appearance and accidental nature of the ulcer—as irritable, simple, indolent. Here the element of the greatest practical importance is taken first; the principle of the classification being intended as a guide to the principle of the treatment. To treat an ulcer according to its *look* is not to go back to the origin of that ulcer, and we ought not

to expect to be able to cure it in that way. In a subsequent part of this work I shall describe a course of treatment which aims to satisfy both conditions of the problem—which tries to heal the ulcer considered simply as an ordinary breach of surface, and which helps to rectify that wrong state of venous circulation on which the ulcer depends.[1]

---

[1] Mr. Gay has recently described the "arterial ulcer" ('Lancet,' Jan. 11th, 1868), an extensive, deep, sluggish form of ulceration which may invade immense tracts of skin and of deeper structures. It must be familiar to most surgeons from its absolute incurability. Mr. Gay has traced these ulcers invariably to disease of the deep arteries of the limbs.

CHAPTER III.

THE SYPHILITIC ULCER.

"SYPHILITIC ulcers may result from pustules, tubercles, or boils, or may begin as tertiary sores; they frequently occur where the integuments are thin, or where they are moistened by the natural secretions of the part. They are circular, with elevated edges; tend to spread in circles, with a foul greyish surface; often creeping along slowly, and destroying deeply the parts they affect; leaving cicatrices of a bluish or brown colour, thin and smooth, which are apt to break open again on the application of any slight irritation."[1]

This sentence portrays with concise accuracy the characteristic pathology of the syphilitic ulcer. The so-called *gummatous tubercle* or *tumour* is the most common primary syphilitic læsion of the skin of the lower limbs; it is an aplastic exudation of a degraded type, irritating the connective tissue like a foreign body, and stirring up an inflammatory action of an asthenic kind. The skin reddens and thins, and presently we have before us what looks much like a common abscess; similarly it breaks,

---

[1] Erichsen's 'Science and Art of Surgery,' 4th edition, p. 539.

but similarly it does not heal. An open sore is established, and a number of these sores may stud the upper surface of the leg, chiefly on the most muscular and fleshy part.

Note particularly the "foul greyish surface" which these ulcers put on, and obstinately retain in defiance of all local remedies. This is an evidence, not only of a low vitality, but of a specific general toxæmia. On the same leg may be observed—(*a*) soft, indolent, gummatous nodules; (*b*) nodules in a state of inflammatory hyperæmia; (*c*) the same with a broken skin, and changed into ill-conditioned sores; (*d*) sores healthy and granulating. The state of the patient's health, and the success of our therapeutics, will determine the expression and progress of the local disease.

Serpiginous ulceration is another cutaneous development of the syphilitic poison, and I have seen several examples of it. Mr. Jonathan Hutchinson has spoken of it as "the result of acquired or inherited taint. It is always a tertiary symptom, and is seldom seen till from five to ten years after the primary disease. In many cases it is very difficult to distinguish it from superficial lupus. If, however, you expose the whole of the patient's surface, you will generally find that, besides the patch he has shown you, there are the scars of former ones. If these scars are white, supple, and soft, you may be almost sure that the disease is syphilitic. The parts on which it occurs also furnish some valuable information. The shoulders, buttocks, thighs, and legs, are favorite sites of serpiginous syphilis, while lupus is more common on the face, neck, and hands. Syphilitic patches are of horseshoe or cres-

centic form in most instances; those of lupus round, oval, or irregular."[1]

To Mr. Maunder we are indebted for a diagnostic observation on the relative position of syphilitic and varicose ulcers on the leg. He says that all those sores which are situated *above* the middle of the leg are syphilitic in their origin, and are mostly multiple also; while the varicose ulcers are found *below* the middle of the leg, and are usually solitary.[2] I can fully confirm what Mr. Maunder has said, and I regard his remark as a valuable one. A nodular soft swelling or creeping superficial ulceration on any part of the lower limb above its middle declares a certain history of syphilis, whatever may be the sex or social rank of the owner of that limb. The orthodox medicines may be administered with the expectation of entire success, and this very success is a demonstration of the correctness of the diagnosis.

The importance of recognising the syphilitic ulcer relates to the use of internal remedies, for both the syphilitic and varicose ulcers are amenable to the same method of external treatment. *Quoad* ulcer, the pathology is the same, and the same physiological steps have to be gone through for the performance of cicatrization and the restoration of healthy skin.

---

[1] 'London Hospital Reports,' vol. ii, 134, 135.

[2] Ibid., vol. ii, 129.

CHAPTER IV.

THE SCROFULOUS ULCER.

Scrofulous sores occur either when "swollen glands inflame and break, or when skin inflames at various independent spots and ulcerates. They are usually free from pain; their edges hard, irregular, and overhanging; the circumference and the swelling itself are pale or violet red; the bottom is here and there marked with streaks of tough lymph, and the pus is thin."[1]

Nearly all scrofulous ulcerations of ordinary skin-structure begin with an exudation process, which softens down after a time, and slowly involves the neighbouring connective tissue. This is the normal and usual form, and its likeness to the syphilitic læsion is manifest. But there is another form not at all uncommon. "A circular piece of skin, of the size of a shilling or half-crown, with the tissue immediately beneath, may slowly inflame and swell, forming a hard red tumour like a carbuncle, but painless. After a time it suppurates imperfectly, but it does not get well till the whole of the diseased part is destroyed by ulceration."[2]

---

[1] South's 'Trans. of Chelius,' vol. i, 622.

[2] Druitt's 'Surgeon's Vade Mecum,' edition 1856, p. 88.

In one of these two ways, then, all scrofulous ulcers form. Usually more than one exist on a limb; their shape is irregularly oval or spreading, and they are very apt to occur in the neighbourhood of a joint. When these ulcers have existed a long time, the adjacent textures may become "greatly enlarged with œdematous infiltration, and clogged together."

The scars which remain after operative proceedings over a joint, or in connection with a joint, are very liable to ulceration in scrofulous persons.

Sinuses may penetrate the tissues of the lower limb, not necessarily leading to necrosed bone. When existing in the tarsus, they are often associated with disease of the complex synovial structures, and the possibility of future bony caries should be entertained.

"Senile gangrene of the integument" is possibly a form of senile scrofula; I have seen several instances of it. Very severe pain is a frequent concomitant, and the disease is not devoid of serious danger. A dirty buff-coloured slough creeps along, until large tracts of skin may become involved. It plainly announces an untimely and rapid decay.

CHAPTER V.

THE TRAUMATIC ULCER, OR WOUND.

ANY breach of skin caused by external agency, which does not heal by *immediate union* or by *primary adhesion,* becomes to all pathological intents an ulcer; and the repair of such ulcer proceeds according to the same laws which determine the healing of any other hole in the skin caused by disease-processes.

In a normal state of body, this traumatic ulcer heals by uninterrupted healthy granulation. But if a body inherit scrofula or be poisoned with syphilis; and if a limb suffer in its nutrition from disease of its blood-vessels; then any common ulcer of the leg, made by a blow or a sharp instrument, will show its sympathy by delay in healing, or even by taking a form significant of some general blood-læsion. And thus a trivial local injury may merge itself into a larger systemic trouble, and its treatment may become only the small part of a great whole.

When this is the case, the wound goes out of the traumatic category, and must be submitted to wider principles for its cure. A granulating ulcer may develope into an indolent or irritable sore; its characters may be modified by syphilis or struma; varicose veins may bring it into

difficulty. Under any or all of these circumstances the faculties of observation and inquiry must be exercised; effects must be coupled with their natural causes, and the management of the case proceeded with accordingly.

The superficial granulating area which is left after the separation of the sloughs caused by a burn, is another illustration of a healing traumatic surface. Similar results happen from the application of a medicinal or potential cautery.

Healing by scabbing, or under a scab, has been described as the most natural, and (in some cases) the best, of all the healing processes. A master-pen has portrayed it. "Very commonly, in animals, if a wound be left wide open, the blood and other exudations from it dry on its surface, and, entangling dust and other foreign bodies, form an air-tight and adherent covering, under which scabbing takes place, and which is cast off when the healing is complete. The process seems to consist in little more than the formation of cuticle on the wounded surface; and it has the advantage that, as no granulations are produced, there is little or no contraction of the scar. In man the same process is less frequent; it is more apt to be spoiled by inflammation producing exudations under the scab, which either detach it or prevent the healing of the surface beneath it. Sometimes, however, the blood shed from a wound coagulates and dries on it, and, remaining as a scab, permits healing under it; or, if this do not happen, a similarly effective scab may be formed by the serous fluid or lymph by which the surface of an exposed wound usually becomes glazed; or, more rarely, the pus of a granulating wound may scab over, and sound healing

take place beneath it."[1] I request special attention to this accurate description of *healing by scabbing*, because it is a simple natural process, which will be proposed to be made the basis of a simple rational treatment. Doubtless it is a plan which would be more frequently carried out if medical art did not sometimes thwart Nature, instead of helping her.

Violent blows on the front of the leg in thin people may lead to a slough of skin-structure, owing not so much to the violence as to the sudden compression of tissue against the sharp edge of the tibia. Even the bone itself may suffer a superficial necrosis, so that what seems at first a very ordinary wound may become an outward sign of danger underneath. And in scrofulous children this danger is a very real one.

In a healthy adult, however, the traumatic ulcer is a model of what an ulcer ought to be; assuming that all dead matter, whether in molecule or in substance, has cleared away, and that the surface is red, vascular, and clean. Repair goes uninterruptedly on; it may be delayed or discouraged by a thousand extrinsic events, but it is complete at last. We may study the process step by step, and learn from it many things about the strength and weakness of the system; we may discover collateral helps and hindrances to cicatrization, cherishing the one, and removing the other; and by suitable local treatment we may realize as soon as possible the textural ripeness of the old integument, *plus* the perpetual disfigurement of scar.

---

[1] Mr. Paget in Holmes's 'System of Surgery,' vol. i, p. 587.

CHAPTER VI.

GENERAL PRINCIPLES OF TREATMENT.

From the preceding chapters it will be clear that there are chiefly two circumstances which demand our attention in the treatment of ulcers of the leg—(*a*) the ulcer on the surface, and, in the case of the varicose ulcer, (*b*) the affection of the veins and other structures underneath.

As disease is always a deviation from health, so the cure consists in the restoration of the original state. When the difficulties to be surmounted are not very great, this may be frequently accomplished by the unaided efforts of the system. But sometimes the obstacles to be overcome are more than the unassisted energies of the body can subdue, and then the tendency usually is to depart still farther from the healthy standard.

In our present inquiry we shall have to consider each of these conditions—the ulceration on the surface partaking very much of the character of the former, the deep-seated affections of the limb partaking of the latter.

When the efforts of the system are adequate to the removal of disease, our duty is to observe the steps which Nature takes, and to record her method of proceeding for our rule of practice. The principle of treatment consists then in *imitating a natural process*.

When the system is unable of itself to conquer the

disease, we must, whenever it can be done, assist its efforts by placing it in a position which will enable it to remove the evil. The principle of treatment consists then in *introducing a healthy action.*

The present chapter professes to be an exposition of these doctrines in relation more particularly to varicose ulcers of the leg.

1. *The imitation of a natural process.*—The principle which should regulate us in the treatment of the exposed surface, whether this be traumatic or pathological, consists in imitating a natural process; and in order to understand the nature of this process, we must observe what occurs when Nature alone accomplishes the cure. Let me recall Mr. Paget's words. *Sometimes . . . the blood shed from a wound coagulates and dries on it, and, remaining as a scab, permits healing under it; or, if this do not happen, a similarly effective scab may be formed by the serous fluid or lymph by which the surface of an exposed wound usually becomes glazed; or, more rarely, the pus of a granulating wound may scab over, and sound healing take place beneath it.* From this lucid story we learn that there are three agents which may be concerned in forming a protective scab over a recent wound—blood, lymph, pus. A scab constructed of either of these materials shields the part from outward injury; and, thus covered and guarded, a new skin is formed, and the crust drops off. If by any means the scab be removed before the cure is completed, another quantity of fluid is supplied, which hardens in the same manner as the former; but then all the intermediate time is lost.

Now, how can we practise this principle of imitation in

trying to mend an ulcer of the leg? We should attend to two things:—(*a*) we should apply a substance which will form an incrustation resembling in its effects the natural scab, and (*b*) we should remove the dressings as seldom and with as little disturbance as possible.

When the cure is left to Nature, it is only a superficial ulcer which readily scabs; for, if the ulcer be deep, the quantity of matter is too great to be speedily evaporated into a crust. Now, we can greatly assist the natural process by the addition of some harmless substance which will thicken the discharge and thus produce an incrustation, while even in more superficial ulcers the same application will hasten the formation of the covering required.

An ointment containing a very large quantity of prepared chalk forms the best artificial crust. The earthy matter must be in a much greater proportion than enters into any ointment in the 'Pharmacopœia,' consisting of about three pounds of chalk to two pounds of lard. The best way of preparing this application is not by rubbing the chalk down with the lard; but, having previously reduced the chalk to a very fine powder, melt the lard in any convenient vessel over a slow fire, and then add gradually the chalk to the liquefied lard. This should be stirred and thoroughly mixed until nearly cold, and it is then ready for use. A much more homogeneous compound is thus obtained than could possibly be procured by simple admixture or trituration; the materials are more intimately blended together.[1]

---

[1] In late years I have always introduced into the chalk ointment a very

Several capital advantages accrue from the use of this ointment.

(*a*) It very rarely produces pain, and generally much ease and comfort. The great predominance of alkali prevents the lard from becoming rancid, and so producing irritation.

(*b*) When the lard becomes melted by the heat of the part, and absorbed by the bandage, the chalk is disengaged, and a portion of it combines with the secretion from the ulcer. This secretion is often extremely acrid, and excoriates the neighbouring skin; but, when united with the chalk, it is converted into a neutral innoxious compound.

(*c*) This compound constitutes the incrustation which is formed, first on the surrounding skin, then on the margins, and finally on the surface of the ulcer. This incrustation is necessarily produced in a very gradual manner. It is only when the secretion has considerably diminished in quantity that a layer is deposited on the centre of the ulcer; but the covering which is provided on the edges protects them completely from irritation.

(*d*) Little disturbance of the applications is necessary. At first, the quantity of discharge may require the frequent removal of the dressings; but in a little while this will be wholly unneeded, and our object should be to maintain the mechanical integrity of the chalky incrustation. All fomentation of the ulcer is obviously highly prejudicial.

---

minute quantity of nitric-oxide of mercury. It is necessary to withdraw the mercury when the ointment has to be applied to an extensive raw surface.

Up to this point I have been dealing only with the effects of an evil, not with the evil itself. Another element of disease is present, requiring another element of treatment to meet it. Even supposing that an ulcer on the leg can be made to heal by topical medication alone, it cannot be said to be cured so long as the predisposing cause is suffered to exist intact. The adoption of any method which will simultaneously help to rectify both these conditions must be the nearest possible approximation to a healthy state.

2. *To introduce a healthy action* is clearly, therefore, our second duty. Dilatation of the veins, incapacity of their valves, œdema of the connective tissue, and passive congestion of the capillaries, constitute an enumeration of læsions which declare their own remedy—*powerful and well-adjusted compression of the whole limb.* This, when properly applied, approximates the structures to their natural form and function, and thus introduces the healthy action required.

The læsion of the veins is partly mechanical, and therefore admits partly of mechanical treatment. When their walls are brought into closer apposition by means of external pressure, the segments of the valves are brought nearer to one another; and, so far as they are not altered by disease, are restored to the performance of their functions. To the lymphatic vessels and blood-capillaries compression seems to act as a mechanical tonic, bringing them back to their normal physiological state. Every one of these morbid conditions is more or less dependent on the others; and, consequently, if they are all submitted at the same time to the same curative

effort, there is the greater probability of perfect recovery being attained.

The good effects of pressure are noticeable also on the ulcer itself. The edges are flattened and brought together; granulations which are too prominent are brought to the level of the surrounding skin. The extent of the ulcer is lessened during healing, and hence the size of the subsequent cicatrix is lessened also. But the results of pressure are not mechanical only; dynamic changes are produced in the condition of the ulcer, by which the organization of new material is rendered more satisfactory and sure. Less fibrine passes off in an aplastic shape, and more becomes available for the formation of granulations; while, in point of time, no method produces its effect with such certainty and quickness.

A bulky and unwieldy limb will become wonderfully reduced in size by well-regulated and constant pressure. The swollen and spongy connective tissue is reduced and consolidated, œdema disappears, and the muscular outline of the leg is again displayed. And, assuming the absence of disease of vital organs, these benefits may be permanent. We put Nature in a better position than before; we give her an opportunity of developing her own resources; and thus, in the words of the proposition enunciated, we introduce a healthy action.

An ulcerated leg almost always allows a greater amount of pressure without uneasiness than can be borne by a healthy limb. When a tight bandage is placed on a swollen leg, one quick effect which it produces is to reduce the size of the veins and to excite the removal of the fibrinous œdema; and by this means, the leg becoming

less, the tightness is proportionately diminished. But if the bandage be placed with the same force on a healthy limb, it meets with nothing so yielding or which is so readily taken away to diminish its bulk, and there is therefore a greater resistance; while a correspondingly greater suffering and reaction are experienced. A swollen leg will be found to submit well to powerful compression; but as the limb becomes reduced to its natural size, it is more sensitive to the remedy. Greater resistance is offered to the bandage as the parts resume their normal bulk; there is a gradual increase of susceptibility to its impression, which is equivalent to an increase of force in the pressure. In other words, there is a balancing self-adjustment between the disease and the mechanical agent designed to control it.

Usually, the combined application of the two general principles announced just now succeeds in practice. The object to be kept in view is twofold—support the veins and other structures below; protect the surface of the ulcer above. Do these things together, and it will be found that many ulcers, which at the first glance appear very unhealthy, asking (so to speak) for some local remedy to correct and cleanse them, put on a more favourable aspect as soon as pressure restores a natural action in the parts beneath them. We ascertain that it is the diseased state of the veins and other structures that exerts the chief influence on the character of the ulcer, and accounts for its obstinacy; hence we direct our primary attention to this diseased state, knowing that an improvement in the physiological health of the limb will be followed very soon by a corresponding improvement in the health of the ulcer.

And when this metamorphosis occurs, the chalk ointment forms a protecting crust with the secretion of the ulcer, and firm cicatrization is quickly produced. So that when I see an ill-conditioned ulcer at the outset, I perceive (as a rule) no necessity for applying poultices or stimulants or empirical things of any kind; but, with the modifications to be enumerated by-and-by, I cover it with a dressing of the chalk ointment, apply the bandage with a methodically steady pressure, and the aspect of the ulcer is almost immediately changed. The correction is accomplished from within, and therefore need not be attempted from without. The conditions of the therapeutical problem are satisfied by the principles which have been laid down; but what up to the present point is only theory will now be described in practice.

CHAPTER VII.

APPLICATION OF GENERAL PRINCIPLES.

It is my duty now to describe fully and minutely the practical application of the principles of which an exposition has just been given.

I propose to relate, firstly, what appears to be the right treatment in accordance with those principles, and which, in my own experience, has succeeded well; and, secondly, I shall attempt to show that certain other methods of treatment, very much resorted to, are empirical and wrong.

When we are consulted by a patient who has an ulcerated leg, we should first examine the limb carefully for the purpose of ascertaining whether the veins are varicose or not. In ordinary cases, the condition of the vessels may be detected easily by their enlargements on the foot or on the leg; but sometimes the limb is so diffusely swollen as to render it difficult to determine the state of the veins. Here the history of the case will materially help us. The patient can say whether there had ever been soft purple prominences on any part of the leg; and we can discover by inspection whether the veins are enlarged above the knee on the same side, or on the foot and leg of the other extremity. The sex and age of the patient

also will tell their own story—women being far more liable to varix than men, and old persons than young. But the practical indications of treatment are the same, even if the swelling of the leg cannot be demonstrated to proceed from varicose veins.

The next step is to learn the condition of the integument in general, and that of the ulcer in particular. For some distance around the ulcer the skin is often excoriated and inflamed, and may be even excessively vascular and painful. If there be incompleted sloughing, or active inflammation of the ulcer itself, the use of a poultice, or of some soothing foment, may be required for a short time; but for a *very short time only*. Under all other circumstances little attention need be paid to the superficial appearance of the ulcer, for it exercises hardly any influence on the plan of management to be pursued. Poultices and lotions, by themselves, will never permanently modify the state of a varicose ulcer, however unhealthy it may be; and to persevere in such applications with a curative purpose displays entire forgetfulness of the ætiology of the subject.

Imagine, now, that we have before us an ulcer on the lower part of the leg, perhaps near the ankle, arising clearly from varicosity of the veins. The first thing I do is to brush the surface of the ulcer and of the adjacent skin with a solution of nitrate of silver in distilled water (gr. xx to ℥j). A white coagulated film forms on the ulcer, which represents a *chemical* scabbing process that helps the more complex *vital* scabbing process occurring at a later stage. In the way in which I now advocate its use, nitrate of silver is an "antiphlogistic" of the old sort—

allaying irritability and pain, and checking molecular gangrene. To call this salt a "caustic," when dissolved in pure water, is a misapplication of words; its properties are those of a precisely opposite kind. It raises dynamic tone, and almost always changes the character of an unhealthy breach of surface, whatever may have been its cause. The solution may be brushed over the adjacent skin also, making a thin dark pellicle, which protects it from excoriation. For dissolving the nitrate of silver, spirits of nitric ether may sometimes be substituted for distilled water.[1]

Next, I cover the surface and sides of the ulcer, for some distance beyond the edges, with the chalk ointment spread evenly on lint. No compresses of any kind are to be placed on this; they interfere with the regular operation of compression; they heat the ulcerated part, and prevent the escape of purulent secretion.

The final stage of the proceeding consists in the application of the bandage. A bandage possesses advantages over strapping, in being less irritable to the skin, by being more quickly put on and taken off, by being more easily removed without disturbing the surface or injuring the margins of the ulcer, and by more completely allowing the formation of the chalky incrustation. Equally superior is a bandage to a laced stocking, as the latter does not properly embrace the whole foot. Placing a card, a piece of vellum, or piece of lead, between the limb and the laced

[1] The almost fabulous strength of Mr. Higginbottom's nitrate of silver lotion is certainly unnecessary for the purposes I have described. Mr. Skey has borne testimony to the sedative properties of the same drug when used locally after severe burns.

stocking, as advised by Wiseman, is also objectionable, from its being calculated to afford partial and unequal pressure.

The bandages I use are always made of "domette" flannel.[1] This material is thin, yielding, and elastic, and yet almost any degree of compression can be exercised with it. In œdematous swellings generally the flannel appears very suitable, as it is soft to the skin, and accommodates itself to the greater or less distension of the limb, arising from the increase and diminution of the fluid. The calorific properties of flannel are useful too, as in all structures and organs in which the capillary circulation is obstructed the vital heat is reduced below the standard. The bandage should be at least six yards long, if required for an ordinary male adult; the breadth should be under two inches.

Every portion of the limb, from the toes to the knees, should be equally and evenly compressed. Indeed, compression is of such absolute importance in the treatment of varicose ulcers of the leg, that without it everything else will be comparatively ineffectual. And this being so, the rapidity and completeness of the cure will depend very much on the manner in which it is employed. Without practice, it is not easy to place a bandage properly on the leg; and probably this difficulty is the chief reason why preference is often given to adhesive plaster, as this sticks and remains wherever it is put. The blistering and excoriation often produced by strapping, and the

---

[1] My father used these bandages fully thirty-five years ago; and I have never used any other.

time consumed in the application of it, are sufficient reasons for acquiring skill in the art of bandaging—an art whose comforts and advantages are appreciated by a patient commensurately with the dexterity with which it is practised by the surgeon.

Before beginning to use the bandage it should be rolled up very tightly, so that it may be grasped easily, and held in the hand firmly without slipping. In putting it on, unbind only that portion which is being applied to the limb; if it be loose in the hand, or if a considerable piece be unrolled at a time, it cannot be placed on the leg smoothly or firmly.

The patient should be raised on a seat rather higher than the chair on which the surgeon sits, directly fronting him; a cushion may support the other leg. Place the heel on the front edge of the chair, so that the surgeon thoroughly commands the limb. Begin now at the foot,[1] by making one turn of the bandage at a short distance from the toes. The next fold is brought forward close to the root of the toes, or even over their first joints, so as not to leave any portion of the foot uncovered. A third turn is then made posteriorly to the toes, covering that piece of the bandage where it began; and by this means its commencement is well fastened and secured. Each successive turn of the bandage throughout its course is made to overlap the preceding one by about half its width, and thus every portion of the limb receives a covering of two layers of the bandage. Three or four such turns around the foot bring us to the base of the instep, and then the

[1] The *right* foot is supposed to be the one operated upon.

bandage is passed backwards and rather obliquely downwards under the outer ankle, and around the heel just above its projection. Bringing it forwards under the inner ankle, I have for some years adopted the following plan, when I desire a complete and uniform compression of the limb below the knee, particularly in cases of varicose ulcer about the ankle or at the side of the heel.[1] I draw it down obliquely towards the sole of the foot, under which it passes and then turns over the outer edge of the foot at about the middle. The bandage again goes over the base of the instep, but of course in a contrary direction to what it did before; over the inner ankle and around the heel, and again obliquely towards the sole of the foot immediately under the outer ankle. Passing for the last time under the sole and over its inner edge, the bandage may in some cases be made to embrace the prominence of the heel by one more tight turn. Appearing finally over the front of the instep, and going in a direction from within outwards, the bandage may be made now to go up the leg with an even and equable pressure. After three or four simple turns, according to the length of the limb, the bandage must have each fold reflected on itself (*bandage renversée* of the French surgeons) directly the limb enlarges as it approaches the calf; this simple manœuvre allows nearly the same level to be preserved for each circle which the roller describes. Having come to the top of the calf, two or more unreflected folds are made, and the bandage is then securely fastened

[1] When this rather complex plan is not required, it is sufficient to carry the bandage over the ankle in the usual figure of 8 fashion.

at the side. The limb now looks as if enveloped in a flannel stocking, with the toes peeping out of it.

The bandage should always be conveyed up to the knee, even if the ulcer be seated on the lowest part of the leg or on the foot itself; as the object in its application is not merely to cover and flatten the ulcer, but also to support the vessels of the limb. To use a short bandage over only the ulcerated part, is to forfeit some of the chief advantages of the remedy. Moreover, if the bandage be discontinued on any part of the calf, it is liable to become loose and fall down. It is desirable, also, that the patient should not wear a garter above the bandage, as anything unequally tight on the course of the veins is calculated to obstruct the free passage of the blood.

Usually it is not necessary to carry the bandage above the knee; for how much soever the veins of the thigh may be varicose, yet, when the vessels of the leg are improved by compression, those higher up seldom fail to get better. But now and then the veins of the thigh are very much distended, or there is ulceration of the skin above the knee; in either case the bandage may be required to go over the joint and up the thigh. And then it will be found more convenient to use two bandages; the second to begin below the knee, where the first leaves off. The upper bandages should be passed over the knee in the usual figure of 8 manner; it cannot be made to exert much pressure, but it keeps on the necessary dressings.

A bandage neatly and leisurely applied to a foot and leg for the sake of compressing varicose veins, without any ulceration of the skin, will sometimes remain in its

place for ten or fourteen days, and this in spite of active exercise. Much more force ought to be used in its application than is commonly done; I often pull it at each turn as strongly as I can with the common effort of the arm, and not unfrequently to the full extent of power which I possess. The firmness with which the bandage is put on is, of course, chiefly for the purpose of gaining the good effects of compression on the structures underneath; but then it also contributes very much to make the bandage remain in its position when once applied. Encircle the limb with it in a loose careless way, and it will fall down almost directly the patient begins to walk about. Tight bandaging is extremely well borne if performed in a complete and methodical manner, beginning from the lowest part of the foot around the first joints of the toes, and ending only just below the knee. When pressure excites uneasiness, it is either because the bandage is put on irregularly, or because the lowest part of the limb is not included in its folds.

During the process of bandaging a leg, a patient will sometimes exclaim that it is too tight, and assure the surgeon emphatically that he cannot allow the bandage to remain; but when it is all properly adjusted, and he stretches out the limb, and feels how equally all its parts are supported, he begins to change his opinion. He now hopes that he shall be able to submit to it; and after a few steps are taken, and he finds how comfortably he can walk, his dread that he cannot bear it is entirely dissipated. The fact is, that the combination of the simple soothing dressing with the even powerful pressure, almost always affords very quick relief from pain. The confidence and

concurrence of the patient are thereby speedily secured; he thinks that it would be a good thing to get well even at the expense of some temporary uneasiness, but he justly considers it to be a more excellent way still to be cured by a plan which lessens his pain from the first moment at which it is employed.

The proper application of the bandage is of such great importance in the treatment of varicose ulcers of the legs, that it should, when possible, always be executed by the surgeon in attendance. It is difficult for the most skilled layman to put a bandage on his own limb. The surgeon who, from aversion to trouble or for any other reason, will not stoop to the performance of this most important part of his duty, ought not to undertake the management of an ulcerated leg at all. The real practical difficulty lies with those patients who live at a distance from the professional attendant, and who can give him an interview only at weekly or fortnightly intervals. They must be taught to dress and bandage their sick limb *secundum artem*, and generally some relative or friend will learn and superintend the details.

The length of time which elapses before the bandage and dressings are removed and reapplied, must necessarily be determined by the circumstances of each case. When the ulcer is very extensive and the discharge proportionately great, it may be advisable in summer to dress the leg every day at the beginning of the treatment. Speaking generally, an ulcerated leg is disturbed much too often. One of the notable benefits arising from the use of a simple chalk ointment is that, by its neutralizing the acrid discharge and by its protection of the neighbouring delicate

skin, it permits the dressing and bandage to remain on much longer than would be otherwise possible or desirable. The more seldom the parts are touched and worried, the better. To take off one dressing and put on another, even though done with the greatest care, interrupts *pro tanto* the healing process and the natural steps of cure. Let the dressing remain on until some uneasiness points out the propriety of taking it off for the purpose of allowing the escape of the discharge. Delay the removal as long as possible, without carrying the forbearance too far; avoid the extremes of meddling too soon, and of waiting too long. Taking the average of a large number of cases at all seasons of the year, I find that an interval of two days may, in general, be safely permitted.

One thing must be always borne in mind. An ulcer of the leg may be in a quasi-gangrenous condition, from an utter want of vital power or from improper treatment; but directly it is dressed and bound in the manner I have described, a profuse secretion of laudable pus occurs, an unerring index of improved dynamic tone. This secretion may saturate everything around the leg within twenty-four hours; the patient should be instructed to look for it, and to regard it as a favourable sign; but he will not love corruption and stench at any price, and his necessities will demand attention at least once a day.

In taking a bandage off the leg, it should be gathered up in the hand as it unwinds. A fresh bandage must be used for the new dressing, and the old one washed (not in hot water) before it is used again; or if the means of the patient allow it, a new one may be supplied every

time.[1] Even after the first dressing, we shall often find that a thin film of chalk ointment has been formed about the upper margin of the ulcer, however large it may be; and if the ulcer be a small one, some of the incrustation may be observed on its surface also. *On no account is this chalky crust to be removed.* It is engaged in guarding the delicate and sensitive granulations which are busy in filling up the cavity, and forming the cicatrix. No manipulations are required beyond wiping off, with a piece of dry soft lint, any purulent secretion which remains on the surrounding parts, after the bandage and dressings are taken away. To irrigate and wash the ulcer under the pretence of "cleansing" it, to interfere officiously with the operations of Nature under the idea of assisting her, is to undo in one minute the benign restorative work of the previous forty-eight hours.

At every succeeding dressing we shall be able commonly to observe a gradual increase of the chalky incrustation; first on the sides of the ulcer, then on its margin, and by degrees over its surface. The adhesion of the incrustation to the bordering integument is a fact of considerable importance. It shields the skin from the irritation of the purulent matter; and, being thus shut in from external influence, the integument becomes firm, substantial, and sound. There is no fear that the crust

[1] In Dispensary practice I find that it is rare for the poorest persons to be unable to provide their own bandages. This trivial fact is another proof—if further proof were wanted—of the feasibility of the self-supporting Dispensary system. The poor are virtually demoralised by never being allowed to help themselves; by never being encouraged to lay in store for the sure and certain emergencies of sickness. Mr. Hancock, of 32, Westgate Street, Bath, prepares my domette flannel bandages.

will form over the ulcerated part, and hinder the escape of fluid. The artificial scab is deposited by the ointment in a slow and gradual manner; so long as the discharge continues to be abundant, it is enough to wash off the thin film laid down, and it is only as the discharge diminishes that the crust is completed.

The progress of healing in an extensive ulcer is frequently not confined to its edges, but sometimes small central spots pass on to recovery quicker than other portions. As these increase in size, they tend to convert a large ulcer into a number of smaller ones; and this circumstance not only lessens the period required for the cure, but very much helps the development of the chalky covering. Each central spot serves as a foundation for the commencement and attachment of the incrustation; and the earthy formations radiate from these as from so many points, until the circumference of one meets with the circumference of another. By this means a large ulcer may be covered over in a comparatively short time.

During the progress of the case, the incrustation is very rarely to be dislodged from the surrounding integument; but when from any cause the healing is very slow, the successive deposits on the bordering skin may form so thick a crust as to oblige its removal. And for this reason—a layer may be produced so high as to prevent the ulcer from experiencing all the good effects of pressure; this thickness of the bordering parts may prevent the uncovered centre of the ulcer from being properly compressed by the bandage. But the removal may be done without regret, for before the incrustation has accumulated

to this extent it has already fulfilled its chief object—the protection of the circumferential skin.

When the whole of the ulcer is covered by the earthy crust, the latter should not be disturbed until a sufficient time has elapsed to allow complete cicatrization underneath. And very rapidly sometimes does the ulcer get well, when thus sealed up and hidden, just as Nature herself would do it. As soon as the ulcer is entirely healed, the artificial scab becomes hardened from want of moisture; it then cracks, and, separating into pieces, comes off by degrees itself. There can be no objection even to peel it away gently with an ivory or silver knife; but obviously it is always better to let the scab remain on too long, than to take it off too soon.

Any objection which exists to the scab when it forms spontaneously, does not apply to its chalky substitute when it is formed under the influence of pressure. When no bandage is employed, the natural scab may be thick and irregular, and hollow underneath, instead of being closely and evenly applied to the ulcer. Recent matter poured out in the interspaces may become pent up, and all the evils of an abscess follow. Irritation and inflammation of the part then occur, and the scab requires to be removed in order to let the fluid escape. None of these evils happens when either the natural or the artificial incrustation is formed underneath the bandage. The pressure consolidates all the structures below; and the crust is flat and firm, as no interspace is allowed between it and the ulcer.

In the treatment of ulcers there were two strange and opposite errors in the Surgery of the last century. It was

thought necessary at one time to tease and irritate a raw surface, from an apprehension that it is unsafe to permit it to heal too soon. One writer even says that he would rather "irritate a long-standing ulcer, than coax it;" meaning to affirm that the plain and quiet sequence of Nature's proceedings is to be thwarted and spoiled, not imitated and helped. Other surgeons used means which they supposed to be capable of superseding the natural processes. Alcohol, mixtures of acids, and styptic substances in powder, with other remedies called "driers," were employed from a belief that they would create a cicatrix over the surface of the ulcer. They were imagined to possess properties which are able to convert flesh into skin, and so hasten the cure much more speedily than when left to the ordinary operations of Nature. The shrewd and clever Wiseman aspired to the physiological function of creating skin by a direct conversion of substance. "If only the skin be wanting," he says, "the flesh is so to be dried with medicaments, as the juices coming thither may be hardened into a callous substance, resembling skin;" and in another place he directs us to try and cicatrize "by drying the flesh into callus." The plan of treatment which I have described, and always adopted, shuns equally both these extremes. The artificial scab does not convert flesh into skin, but simply affords a better opportunity than when exposed for the gradual formation of skin by the living action of the ulcer. No property is attributed to the earthy incrustation like that supposed to belong to the "driers;" and one of its most satisfactory functions is to protect the ulcer from those external agencies which may irritate and vex it.

I have now sketched what I conceive to be the typical management of a typical varicose ulcer of the leg. And this affirmative implies a negative, namely, that certain other types of management, much resorted to, are empirical and wrong.

I speak, firstly, of that ubiquitous remedy, the *poultice*. This may be truly called the refuge of ignorance and of neglect. Often it is prescribed without discrimination, and continued for the very bad reason that we know nothing better to do. Consider what an ordinary poultice is! It is a vehicle of heat and moisture—a combination of physical agencies calculated to dilate and to weaken the structures to which it is applied. Its effects are at utter variance with those principles which I have tried to prove to be the foundation of the rational treatment of varicose ulcers of the lower limbs. Incompleted sloughing is the only case in which an apology can be offered for the use of poultices; and even then I believe that a quicker result would be always attained by the bold and early use of compression. Under all other circumstances, a poultice can do scarcely anything but harm, and must be condemned in emphatic terms. The character of an ulcer is deteriorated; healthy granulations become soft and bloodless; and the edges of the ulcer are rendered pale and unorganizable. Further, the protective layer of purulent secretion is absorbed and taken away, and hence the reparative process is proportionately retarded. In few and decisive words, the application of a poultice is nothing less than a mischievous interference with the natural healing operations.

Most particularly do I deprecate the use of poultices of

any kind in "senile gangrene of the integument." For heat and moisture are precisely the agencies which hasten decomposition, and encourage any approach to it; and the slough, instead of being loosened and shed, is much more likely to extend. Practically I have found it to be as I have stated, and usually the pain is even increased by heat and moisture. The following case will illustrate what I think ought to be done. I was asked to see a lady, 80 years old, who had three patches of cutaneous gangrene around the left ankle. There had been no medical treatment, and the only local application that had been used was a hot bread-and-water poultice; but the disease showed signs of extension over the foot, and the pain was fearful. I brushed the whole of the diseased surface with a solution of nitrate of silver of half the strength I usually employ; I then dressed it with lint, on which was spread the chalk ointment mixed with an equal part of ointment of benzoated zinc; and finally I put on a domette flannel bandage with moderate pressure. At the end of a week, a profuse laudable secretion loosened the sloughs; in another week, they came entirely off, leaving healthy granulating surfaces; and in three weeks more these surfaces were covered with sound skin-tissue. The constitutional management of the patient consisted in the administration of opium at night, the tincture of perchloride of iron in the day, and abundance of food.

Lotions of every kind are quite as prejudicial. The constant use of cold water, however wholesome the substance may be of which it is the vehicle, is exceedingly injurious to a limb the temperature of which is already reduced by the obstruction in the capillary and venous

circulations. Those progressive metamorphic actions in an ulcer which indicate that sound cicatrization is being carried on, are arrested by the devitalizing effects of cold; and a retrograde step takes place which sometimes approaches a condition of gangrene. I often see cases exemplifying this fact; and it is almost equally often my good fortune to see an immediate improvement under the local stimuli of warmth and pressure.

"Cold water dressing" is an order often prescribed in haste, and carried out slovenly at leisure. Unless a system of almost perpetual irrigation be pursued, the cold water becomes almost immediately warm from contact with the body; and the lint or rag, which is the carrier of the water, very quickly becomes dry. And we can guess how irritating dry linen must be to tender granulations. To cover the application with oil-silk or gutta percha does not mend matters, for it entails other disadvantages. Except to those persons who have sufficient time to make a sport of their therapeutics, washes, and cold water, and wet bandages, are special aversions.

To keep patients in bed, or at least in the recumbent position, is an almost universal element in the professional treatment of varicose ulcers of the leg. Here we see another offshoot of error, originating with the notion that the disease owes its origin to a physiological, not to a pathological, state. Compression answers every object to be gained by the recumbent posture; and the help which this may be theoretically supposed to afford by no means counterbalances the acknowledged evils dependent upon the loss of constitutional exercise. Continuous rest, on account of a small local læsion, implies (assuming

the body to be otherwise in health) a large capital of bone and muscle lying fallow, and even deteriorating from want of employment. Then we ought to recollect that it is with many persons a matter of serious inconvenience and cost to abandon all active pursuits for weeks or months of consecutive monotony; a weariness of flesh to the sinews of an agile impulsive man, such as we can hardly realize. And this is a subject of great moment in the economy of hospitals, in which we often find beds occupied by cases of ulcer of the leg to the exclusion of other more urgent and certainly more interesting forms of disease.

I lay infinite stress on the fact, that in treating *ordinary* cases of ulcer of the leg, proceeding from any cause, there is no necessity for any rest of the limb at all. Accurately carry out the method of treatment which I have described, and it will be perfectly safe to tell a patient to go and do pretty much what he likes—of course to be moderate in physical exercise, as he ought to be moderate in everything else. Bind up a man's wounds in the way which I have related, and the surgeon will discover that exercise confers the direct and positive benefit of assisting and sustaining those processes which eventually accomplish the act of restoration. Exercise gives a healthy stimulus to the granulations, and sound healing will be performed while a person is running the eager race of getting his bread. And yet how recently has the peremptory virtue of Rest been enforced with all the authority of Dogma![1] To lay

[1] "Rest is Nature's own remedy, for the application of which she takes no denial; and the practitioner of the healing art takes his cue from this great teacher. If he has an ulcer on the leg to cure, he enjoins rest, and lays up the limb accordingly."—('Med. Times and Gazette,' Oct. 19th,

up a limb in idleness admits of the healing of an ulcer by a degree of vital action, which is unable to maintain the permanence of that healing when the limb is restored to use. There was a danger some years ago of treating Hysteria as organic disease; now, the much greater danger seems to be that we may call organic disease by the mock name of Hysteria. So with regard to Rest as a therapeutic factor; the pendulum has swung too much the other way, and we tell a man with an ulcerated leg to go to bed or to seek change of air, partly because such instruction costs little thought and trouble, and partly because the advice can do no harm when we have exhausted all our other resources without effect.[1]

An immense array of facts in my possession have practically settled this question, and authorize me to announce that moderate use of a limb, when properly bandaged, is not only no bar to the cure of a varicose or any other kind of ulcer, but is an actual help to it. I quote a very bad case as an illustration. About a year ago a woman in the middle rank of life came to me from Glamorganshire, and showed me a leg having a long ragged foul ulcer from the calf nearly to the heel. It looked like epithelial cancer; and amputation had been recommended by high surgical authority, not only on account of its supposed absolute

---

1867.) I ask all patients who consult me for ulcer of the lower limb, and who have previously enjoyed medical superintendence, whether they have been told to abstain from exercise? The reply is with extraordinary unanimity in the affirmative.

[1] It is only fair to remark that Dr. Underwood and Mr. Chapman fully recognised the value of exercise as a curative stimulus. Mr. Hunt and Mr. Houghton have endorsed the same view.

incurability, but in order ultimately to save life itself. At the outset I gave an unfavourable opinion of the case, with the sole qualification that its obedience or non-obedience to remedies in a few days would display the possibility or otherwise of doing good. The local treatment was exactly what I have detailed, the bandage being applied as tightly as it could be borne; and the patient was told to walk as well as she could with crutches. Citrate of iron and iodide of potassium (gr. v of each in chloroform water) were given internally three times a day; and an opium pill at night when required. The leg was dressed every day. In less than a week the surface of the ulcer was clean and healthy; and within a month the circumference was rapidly healing. The patient now walked with only the aid of a stick, and her health quickly improved in every way. Before six weeks had elapsed she was obliged to return home; but at the end of three months from the beginning of the treatment I learnt that the ulcer had entirely cicatrized, with the exception of a portion about the size of a crown piece of money. The heel could not be placed quite flatly on the ground, owing to a contraction of the muscles at the back of the limb; hence a slight limp in walking, which since then has gradually disappeared.

The effects of a pathological condition may sometimes be anticipated by employing compression on a leg in which an ulcer has not yet appeared. If our science is so often at fault in the attempt to remove an evil, we ought to discover in this the stronger inducement to ward off its approach. Whenever a limb is manifestly varicose and enlarged, even though the integument be perfectly whole,

we may at once note the signal of coming danger, and apply our remedies accordingly. Equal vigilance is necessary that, during the treatment of an actual ulcer, the compression is not too suddenly discontinued or diminished in force at too early a stage.

The medical management of varicose ulcer of the leg is of high importance. In all apyretic states, iron, that *facilè princeps* of tonics, is given with the greatest advantage; the form will be easily selected by the skilful therapeutist, but the tincture of the perchloride is generally the most useful of any. It may be prescribed in doses varying from fifteen to twenty-five minims in water three times a day, immediately after food, with or without spirits of chloroform. As a mild aperient, cream of tartar (dose, a third to half an ounce) is scarcely to be surpassed. I assume that the patient's hygienic circumstances are good, and that he has abundance of nutritious food, with a sufficient variety of the same.

A description of the palliative and radical treatment of varicose veins is not within the scope of this work. I may, however, refer to an excellent *résumé* of this question in the 'Gazette des Hôpitaux' for January 17th, 1854, in which M. Nélaton criticizes the various modes which have been adopted, and admits that he confines himself to a palliative treatment by uniform pressure of the varicose limb by an elastic bandage. More recently, Mr. Callender comes to nearly the same conclusion after a fair review of the subject.[1]

Treatment of the Syphilitic Ulcer.—This is usually very

---

[1] 'System of Surgery,' vol. iii, p. 321.

simple. The local treatment is in every respect the same as in the case of the varicose ulcer; the bandage retains the dressings in their place, and supports the limb. But I add sometimes fractional quantities of iodine ointment to the chalk ointment; and sometimes I put on the surface of the ulcer, underneath an ointment dressing, some cotton wool soaked in black wash (*Lotio Hydrargyri nigra*, Ph. B.). The leg may require attention every day.

The constitutional treatment is of so much moment, that an incorrect diagnosis may lead the practitioner into endless trouble and discredit. Iodide of potassium is, of course, the grand remedy, but there are several skilled points in its administration deserving close attention. Note, firstly, that if there be undoubted cachexia, or blood and tissue unsoundness resulting from chronic syphilis, iron in some form must be combined with the iodide of potassium; the ammonio-citrate and the potassio-tartrate appear to me to have the first claim. Not only does the addition of iron economize the other salt by rendering very large doses (I mean more than gr. xv) generally unnecessary, but by its specific hæmatinic powers it promotes the reparative process. It is a therapeutic axiom of iodide of potassium that it never (or with extreme rarity) exhibits toxical effects in the system when used for the cure of syphilis; but it may be doubted whether the enormous doses lately alleged to be successfully prescribed would have been really required, if iron had been originally prescribed too. Secondly, a small dose of blue pill every night may often be advantageously given in addition to the medicine just named. But, thirdly, there is no medicinal agent so

potent as a combination of iodide of potassium and bichloride of mercury. I leave the chemists to determine the precise nature of the compound which is developed; what I know for certain is, that it has therapeutic qualities of astonishing efficacy and power. I assume that I have something like a soluble biniodide of mercury to deal with; it is not a new medicine, but for the first detailed account of its use I am indebted to Dr. H. W. Fuller, physician to St. George's Hospital.[1] Since that time I have prescribed it largely, and not only for the so-called gonorrhœal rheumatism about which Dr. Fuller wrote, but for many syphilitic læsions of the skin of the gummatous and scaly kind; læsions which, in point of chronology, bear to primary syphilis a somewhat intermediate position between the secondary forms and those traceable to a positive cachexia. And once more—the remedial benefit of the biniodide of mercury is often greatly enhanced by the addition of a suitable salt of iron, and perhaps of cod-liver oil.[2]

When syphilitic ulcer of the leg or of any other part of the body arises from a deep rooted and apparently abiding depravation of tissue, a prolonged residence at the sea side, or even an entire change of climate, may work a permanent cure when other means by themselves have failed.

Treatment of the Scrofulous Ulcer.—The treatment of this, too, is principally constitutional. For many years it

[1] 'Lancet,' January 31st, 1863.

[2] The biniodide of mercury has a troublesome tendency to purge in some cases. This tendency is usually checked by the addition of a few drops of wine of opium.

has been my custom to give iodide of potassium with iron (generally the ammonio-citrate) to strumous children afflicted with ulcers; five grains of each salt in chloroform water three times a day to a child ten years old. And as a child thrives in health, and has its nutrition and growth sustained by nitrogenous and fatty foods, so will the scrofulous ulcer almost always tend to get well.

But we may assist the healing process by the local treatment described on an earlier page, and which applies in this case word for word. Pain is so generally alleviated by the chalk ointment and bandage, sleep is so favoured, and irritability of system is so checked, that there is seldom any real difficulty in obtaining a satisfactory result even in very chronic cases. Patience is, of course, a virtue of high merit, as a quick success is rarely attainable.

Children usually bear bandage-pressure well, and we may avail ourselves of this method for the gradual closing up of those long tunnel-like sinuses reaching from the surface of a limb to its deeper parts. Or when a sinus appears to run along transversely under the skin, its walls may be approximated and ultimately made to adhere by the local pressure of pledgets or rolls of cotton wool under the bandage. In this way I completed the cure of a very chronic sinus in the leg of a young girl, during the spring of 1862; and the structures have remained sound ever since. A cautious prognosis must be offered whenever bony necrosis is suspected; in this instance there is no escape from rigid obedience of the laws of pathological surgery.

Treatment of the Traumatic Ulcer, or Wound.—A person knocks his leg against a piece of furniture, or receives a blow upon it sufficient to cause a wound: how is this to be

treated? It is assumed that there is nothing of an *incised* nature about it; nothing, I mean, requiring sutures and plasters. As the result of a common domestic injury of the leg, anything may be presented to us from a mere cuticular abrasion to a large granulating ulcer, irritable, inflamed, and painful, epitomizing the constitutional health or disease.

I contend, in the first place, that every sort of wound, as such, requires protection for two reasons: (*a*), contact with the air is too stimulating, and may lead to further irritation; (*b*), the soil and dirt of this working world must be kept from it. I venture to differ from Mr. Paget, who thinks that a "simple incised wound, when its sides are brought into contact, may be left exposed to the air."[1] But if I affirm that even an incised wound, brought together in the orthodox surgical fashion, ought to be protected; much more should this protection be afforded to a raw granulating surface, such as every wound becomes which has failed to heal by *immediate union* or by *primary adhesion.*

The principle being conceded, then, our inquiry is how we are to carry it into practice? "Lint soaked in oil," "wet or dry lint," "simple cerate on perforated linen,"—I must declare against them all, as unfit for the purpose, and physiologically improper. I admit that they act as screens against the atmosphere, and against accidental pollutions; but they do not help the wound to mend; rather the wound, if it mends at all, does so in spite of them. Oiled lint is downright nasty; wet lint soon

[1] 'Holmes' System of Surgery,' vol. i, p. 591.

becomes dry; dry lint is extremely irritating; simple cerate is less objectionable, but it seldom allays pain. The records of Surgery testify to the number of other substances which have been applied to that docile thing, a healing wound; and to the long-suffering of the patients who have tranquilly endured them. So far as the written Surgical doctrine of the day goes, a covering for a wound which shall guard it from outside dangers, soothe casual irritation, and help forward the act of cicatrizing, appears to be a *desideratum* of therapeutic science.

Now, I plead that these conditions are fulfilled more efficiently by the chalk ointment, spread on soft lint, than by any other known agency. The elements of the problem which we have to solve are surely easy enough. A tradesman, or a farm labourer, in the course of his ordinary business, strikes his leg sufficiently hard to inflict a small wound; it bleeds for a little time, but this soon ceases; he binds it up with the first convenient thing at hand, and sends to a neighbouring druggist for some nostrum to do the sore good, but which almost always makes it very bad, and teazes him with pain; and finally, he applies to his medical attendant to have his troubles quickly and pleasantly removed. And my advice is as follows:—brush the wound over with a weak solution of nitrate of silver (gr. v to ℥ss of distilled water); place over this a piece of very soft lint on which has been spread the chalk and benzoated zinc ointment; keep everything in position by a domette flannel bandage, going from the foot to the knee, and put it on with very moderate tightness. Tell the patient then to walk about as if nothing had happened; the wound is withdrawn from his observation, and he

need not even think about it; a fresh dressing will be needed every other day, but the operation does not occupy ten minutes to perform. The leg and foot may be washed with soap and warm water every time that the bandage is taken off; this is especially desirable in summer; but the wound itself is not to be touched. If the patient be in perfect health, no medicine is wanted but an occasional seidlitz powder. Cicatrization of the wound will uninterruptedly go on; Nature will accomplish her work in her own quiet way; asking not so much our assistance as the absence of opposition and obstruction.

A child has been severely burnt about the chest and arms; the superficial sloughs of necrosed skin and connective tissue have come off, leaving a healthy granulating area, one or more; what is to be done? Try the simple plan I have just given for the treatment of a wound. Note the relief from pain, the unruffled sleep, the restoration of appetite, and the rapidity of the healing process. Within the whole range of external therapeutics I know few things more satisfactory; especially if the poor little patient has been submitted to the remorseless discipline of the various so-called remedies for burns enumerated in professional text-books. Again, a domestic servant scalds her foot or leg; if the injury be over an extensive surface, rest for a few days is desirable and even necessary; but at a comparatively early period the scalded limb may be dressed *secundùm artem expositam*, and she may resume her usual occupations. All more trivial degrees of the same injury can be treated in this way with remarkable success. The principle is always the same, and when it is largely and fully recognised, there ought to be no

difficulty in its practical application. Very many cases of this kind come under my care, both in private and in Dispensary practice; failure in the treatment is extremely rare: and when it does occur, it suggests an inquiry into some constitutional cause for it.

And for a score of the common casualties of common life, I recommend the surgeon to go and do likewise. Obeying Nature by imitating her, we reap the physiological reward of converting disease into health without our patient's knowledge, and almost without his co-operation.

CHAPTER VIII.

HINDRANCES AND DIFFICULTIES.

HITHERTO I have depicted facts conforming to certain well-known types of pathology, and the method of my treatment has been of typical outline too.

But Nature indulges in infinite variety; and just as no two individuals in health are exactly alike, so are no two cases of disease. This bountiful abundance of disease-forms may be an embarrassment to the immature practitioner; but it tends to quicken and ripen the faculties of the man who observes while he reads, and reads while he observes. *E libris nemo evasit artifex.*

And thus it is that an ulcer of the leg, apparently of the most ordinary kind—an ulcer which, according to all rules, ought to obey our word and get well directly—sometimes refuses to respond to every effort that we make, and remains an open and painful sore. Or if it heals, the cicatrization is perhaps transient and unsound. The varicose ulcer now and then exhibits these difficulties; nor are they to be marvelled at when we behold the helpless and hopeless condition of many limbs afflicted with varicose veins. If the nutritional phenomena of those limbs are at so low an ebb as to permit portions of the cutaneous structure to perish, the obstacles to a repair of

that structure may be almost overwhelming, even with the best constitutional and local management. And the longer a varicose ulcer exists, the more apt it is to put on accidental characters, disguising its real origin, and possibly compelling us to try new and somewhat empirical remedies.

Varicose ulcers about the ankle are often very troublesome. Rest of the limb for a time may produce good results, because the hinge-like movement of the joint implies *too much* motion; but a long, narrow ulcer in this situation, with its hard and white edge, is now and then a despairing thing to deal with. It may be dressed and bandaged with extreme pressure; approved tonic medicines may be administered; and all the best hygienic circumstances may concur. But the tissues are, in more senses than one, callous and indifferent to all coaxing; they are fed with bad and sluggish blood, and they teaze the surgeon no less than the patient with the inertness of their vital actions. Astounding and almost incredible things have been proposed to subdue this inertness.[1] And when the physician has done his best and failed, surgeons have stepped in with various proposals.

Professor Syme recommends us to blister the edge of the callous ulcer.[2] The effects of the blister are chiefly dynamical, and are said to disperse the subcutaneous induration, which is the obstacle to healing action. Twelve years ago I tried this plan on a small number of cases, with the

---

[1] I have heard of a compound of paraffin and tar being applied to an ulcer of the leg, as if it were possible to flog into submission a bit of rebellious pathology which has successfully resisted all other means.

[2] "Contributions to the Pathology and Practice of Surgery," quoted in 'Med. Gazette,' February 25th, 1848.

not very wonderful result of increasing the trouble which I had to cure; I changed small ulcers into large ones, and was worse off than ever.

Mr. Holt has proposed the exclusion of atmospheric air as an agent in the treatment of ulcers of the lower limbs.[1] According to the description of the process which he pursues, I imagine that the benefit arises very much from the judicious use of compression, rather than from any specific good derivable from the exclusion of atmospheric air. The same criticism applies to Dr. Neumann's suggestion of filling up ulcers with charcoal.

Mr. Gay maintains that the obstacles to the entire and permanent healing of indolent ulcers are to be found in the condition either of their edges or of the adjoining tissues, or in that of both conjointly. In other words, the edge of the ulcer is not free to contract, or the adjoining textures are not free to yield to the traction that the edge, in closing in, makes upon them.[2] Mr. Gay, therefore, suggests that an incision be made through the healthy skin and superficial fascia, within a short distance of the edge of the ulcer, in a direction parallel to the axis of the limb, and, therefore, at right angles with the line of principal tension. I have never yet performed this operation, simply because I have never yet had a patient who has allowed me to do so. However sound in principle it may appear, there is the obvious risk that the artificial openings may become as reluctant to heal as the original ulcer. Mr. Chapman has commented upon Mr. Gay's proposal, and has adopted a modification of it, which he considers

---

[1] 'Lancet,' April 24th, 1852. [2] Ibid., June 18th, 1853.

simpler in performance, and attended with less danger; but he admits that the cases were extremely few in which an operation is indispensable; and still fewer (he thinks) are the private patients who will allow the treatment of an ulcer on the leg by the scalpel, even when all other attempts have failed.[1]

Mr. Hainworth has revived the ancient practice of excising the margin of the "callous" ulcer. The primary obstacle to successful treatment in this case is the presence of a solid ring of compact and indurated effete cuticle, which constricts the vessels of the cutis immediately around the ulcer, and consequently arrests the formation of new skin.[2] Mr. Hainworth believes that the most safe, easy, and expeditious method is to perform its entire excision. The value of this plan has been attested by Mr. South; and I have practised it a few times with very marked success. Mr. Spencer Wells' electric moxa is a pretty toy, with which I did some service in one tedious case.

The internal administration of empiric substances like cantharides and turpentine has been resorted to by the weary surgeon, when he has spent all his energies in vain. Mr. Skey's recommendation of opium is based upon prin-

---

1 'Med. Times and Gazette,' August 13th, 1853. Judging from a recent report of hospital out-patient practice ('Lancet,' January 11th, 1868), Mr. Gay's treatment is now even more heroic still, and includes "topical bleeding by leeches," "scarifications tolerably deep across the edges," "free elliptical incisions along either side of the ulcer," "blisters," lotions of "dilute nitric acid and opium," and of the "acid pernitrate of mercury." It must be Mr. Gay's privilege to have very submissive patients.

2 'Lancet,' January 21st, 1854.

ciples which are unquestionably authentic and sound; but though I have sometimes succeeded with it, I have more often failed.

The sum total of my experience is this: that the surest way in the long run of battling with these obstinacies of surgery is to begin action with definite principles, and to persevere with resolute constancy. Early and rapid success cannot be expected, and ought not be expected, by any one. Many people think a little ulcer of the leg to be a trifle in its first stage, and treat it with the pharmacopœia of the toilette-table; next it falls into the hands of herbalists and old women. When the doings of these eclectic folk come to an ignominious end, professional help is sought. And I earnestly advise the surgeon to go on as he begins, without discouragement and without fear; and above all, to avoid incessant change of remedies, which betrays his own want of faith in everything.

Assuming that the external treatment of any chronic varicose or traumatic ulcer of the leg is in accordance with the method already described as being, on the whole, the best, the administration of iron and iodide of potassium should be continued for several months, with an occasional aloetic pill. Cod-liver oil is sometimes very useful, and requires to be continued equally long. In this way better blood will be furnished to the anæmic or spanæmic patient, and the consequences of a specific cachexia may be partly neutralized. If the case clearly requires it, the edges of the ulcer may be pared. All other means failing, the plan of strapping may be tried; and when dexterously put on, it is very efficient. Look for gout in gouty people, and handle it accordingly; remember the possibility of

bowels being overloaded with fæces; examine the urine for constitutional troubles showing themselves by the kidneys. Of purely mechanical hindrances, the most common, perhaps, is the feminine fixture of a garter below the knee; this ought always to be proscribed without qualification. Every limb afflicted with varicose veins, but in which no ulcer has yet appeared, should be washed frequently with hot water and soap, and gently shampooed afterwards; the vital activity of the limb is greatly promoted thereby.

The most insuperable hindrance to the healing of an ulcer of the leg arises out of that universal degradation of tissue which is associated with *chronic alcoholism.* Any drunken, dissolute fellow who asks a surgeon to cure a number of sloughy-green holes on the skin of his leg, may as well be told at once that it is nearly impossible; the tendency to molecular death in every cell of his body is so strong that plastic granulations cannot form. His frame is going down the hill in every nook and corner; his structures are gone beyond repair, and can only just hold themselves together; the *nisus* of restoring that which is lost is unattainable. I am speaking, of course, of that state of body which renders a man liable to almost anything—a physical deterioration which is represented by the obtrusive facts of apoplexy, albumenuria, and fatty heart.

Over-work or under-rest of the nervous and muscular systems may hinder an ulcer of the leg from healing. For instance, a domestic servant strikes her leg, and a small wound, by being neglected, becomes a large foul ulcer. Now, this ulcer may not yield to the most careful treat-

ment until the constitutional formative power is raised by better hygienic means. And it may be necessary for the patient to have rest, not for the immediate sake of the limb, but because only by rest can the general health be permanently improved. I have lately had a striking case of this sort under my care.

An attack of casual illness of any kind, especially of one of the acute specific diseases, may not only quite impede the healing of an ulcer, but undo the curative work of several weeks.

Let a varicose ulcer be once cured, and a prudent patient will continue to wear a domette flannel bandage for a long time. But in spite of all our wisdom and all our skill, we shall now and then be baffled by what seems a very simple matter. We shall alternately blame Nature and blame ourselves; but in truth neither ought to be blamed, for we are sometimes called to fight with what is irremediable, and to do our best is our highest duty.

There is a little common difficulty arising out of varicose veins which may be appropriately noticed here. A tortuous vein, or a cluster of tortuous veins, containing clotted blood, and feeling hard and knotty under the skin, may suddenly set up inflammation in the neighbouring connective tissue, signified by an erysipelatous blush on the skin, with the sensations of heat and pain. Now this may become an awkward matter to deal with unless promptly attended to. The veins are physiologically *ruined*, as it has been well said, and therefore we need not think much about them; but they must not be allowed to damage other functions. The treatment is very simple. So long as real inflammation exists, there

ought to be a recumbent rest of the body, and the foot supported at a higher level than the leg; effervescing saline draughts may be given frequently, with a purgative if necessary. Locally, I soak a piece of lint in hot water, and place it smoothly on the affected part. I cover this with oil-silk, and support by a domette bandage very lightly applied. Generally the improvement is so quick that the patient can take gentle exercise in a few days; but the local and general treatment should be pursued for some time, and an iron tonic is often very serviceable.

Two other remarks require to be made. Any person after middle age who is wounded in the leg, and who shows undeniable signs of premature decay, should always be confined for a time to bed or at least to a sofa. He has no nerve-power to spare, and what he has must be sustained and economised to the utmost by rest and good feeding. Unless this be done, erysipelas or gangrene, or some other desperate trouble may supervene. Then I have found that some kinds of queer refractory ulcer, difficult to classify and to describe, and not traceable to any very manifest cause, will sometimes heal with singular speed when their cavities are filled up with cotton wool steeped in *black wash*,[1] and this simply covered with lint and supported by the domette bandage.

---

[1] *Lotio Hydrargyri nigra. Ph. B.*

CHAPTER IX.

THE PROPRIETY AND SAFETY OF HEALING AN ULCER OF THE LEG.

Is it safe to heal an ulcer of the leg? Does it not sometimes happen that its removal is followed by severe and even fatal constitutional mischief? Is not an ulcer to be considered more or less in the light of a salutary drain, very dangerous to dry or choke up?

These were very important questions thirty years ago, and they were discussed with an earnestness that now we can hardly realize. With our present knowledge, there ought to be no difficulty in promptly answering them; and yet in a serious tone, not as if we were noticing a caricature; for I have good reason to believe that there is still not at all an insignificant residue of professional opinion which requires enlightenment and information.

No surgeon would be justified in curing an ulcer of the leg if something worse were always produced thereby. But many persons are content to go on for years with a painful and disgusting ulcer because they have heard that some one has died *after*—though not in consequence of—having an ulcer healed; and popular logic is rarely keen enough to draw fine distinctions.

Now, what are the causes of ulceration of the leg?

The great majority of ulcers come from varicose veins, wounds, syphilis, and struma. The doctrine that an ulcer is salutary implies that it has been produced by an internal effort of the system, in order to free the body from something prejudicial or dangerous; and hence, before it can be said that an ulcer is serviceable to the body, it must be shown to arise from a constitutional origin. This obvious axiom enables us to decide at once that all ulcers, derived from any *external* or purely *local* cause, are not salutary; and consequently no danger can happen from their removal. The conclusion is legitimate, that we can heal all ulcers which come from varicose veins and from outward violence without apprehension of evil effects; and by far the greatest number of ulcers are produced by these two causes.

But it may be alleged that danger might attend the healing of a local ulcer, viewed simply in relation to its effect on the system. Some ulcers secrete copiously; and when this secretion has been very abundant and has lasted a long time, it may be thought unadvisable to heal the ulcer, because—so the objection runs—the discharge is arrested and thrown back on the system; a drain for effete matter is stopped up. It is sufficient to reply that the purulent or puriform discharge is formed for the very purpose of healing the ulcer; it is a necessary physiological step in this process; the ulcer is not produced to be an outlet for the discharge. Close the ulcer, and no discharge flows, for the plain reason that no discharge is required. That cannot be said to be stopped which is not produced, and for which there is no reason that it should be produced. The flow of purulent matter from

an ulcer is the natural result of the healing of that ulcer; it takes place, not to rid the system of anything hurtful, but in order to repair the surface which is broken.

The quantity and quality of purulent discharge from an ulcer are neither a proof nor a consequence of the existence of any foul humours in the blood, but depend simply on the extent and character of the ulcer which secreted it. "Laudable pus," as such, cannot be *driven again* into the system; the only reasonable inquiry relates to the propriety of allowing the whole quantity of blood to circulate in the system, instead of permitting any part of it to be expended in the formation of pus. And so, all the blood being kept in the body, it used to be said that accumulations may take place here and there, and perhaps even inflammations and apoplexies; and hence the dogmatic theory that it was often unsafe to heal ulcers. But even conceding the truth of such a theory for a moment, it is not a necessary sequel that the ulcer should be allowed to remain open; for the supposed superabundance of blood can be disposed of in some other way: its quantity can be lessened by a smaller diet and by purgatives, and its quality can be altered by the same means, especially if the excretory organs be vigorously stimulated.

All the facts and arguments point in the opposite direction. Most ulcers which have existed a long time are to be found in elderly persons of weak constitutions. So far from these persons having too much blood, they have blood too little and too poor; the ulcer literally drains the system, and starves it. To heal the ulcer is positively to produce a better state of health than there was before, and unqualified by a single danger. A patient who has

an ulcer on the leg may be very ill and very irritable; but the illness and the irritability are perhaps caused by the ulcer, and will disappear when it is cured. The mere co-existence of the two conditions does not determine the question one way or the other; the details of the past health, and the state of the limb, require to be closely examined.

The authentic facts on this subject, therefore, are shortly these. A person who is apparently in perfect health may have a wound on the leg cured as quickly as possible. A varicose ulcer implies some deterioration of health, local or general; but this ulcer ought to be cured also as quickly as possible, and the same means which assist us to do this will also improve the constitutional powers. A scrofulous child, suffering from a scrofulous ulcer on the leg or anywhere else, ought surely to be made whole in one part as well as in another. And a syphilitic ulcer will get well almost of itself if specific internal medicines be given. In any of these four cases, how can a hole in the skin discharging pus do any conceivable good? The body and mind are worried by this "thorn in the flesh;" its pains and necessities occupy time and trouble; and a sufferer naturally craves to have it removed, all empiric theories to the contrary notwithstanding.

Organic disease of vital organs, co-existing with ulcer of any kind, demands its own appropriate treatment irrespective of the local evil. If it were a necessary alternative that one of the two maladies must be endured, it would be wise to choose the less, and to put up with the ulcer; but it is wiser still to get rid of both. It cannot

be pretended that an ulcer on the leg is a counter-irritant to disease of the viscera; true counter-irritation acts through the nervous system in the way of reflex correction and check of morbid processes, and thus a blister on the chest may stop a pneumonia or a pleurisy. The best and almost the only apology which can be made for permitting an ulcer of the leg to continue, is when a model plethoric person finds benefit from a seton, or an issue, or a blister, and an ulcer will do the service of any of these.

The possibility of something like pyæmia being developed in the system from an ulcer on the leg, must be borne in mind; though I can say nothing about it from my own experience.

Amputation of the leg is now and then seriously proposed to patients afflicted with ulcer, apparently because the surgeon's wits are baffled and his resources expended. The proposal does not deserve a moment's discussion; but it is recorded in these pages as a curiosity of Surgery.

CHAPTER X.

A SKETCH OF DISEASES OF THE SKIN AS THEY AFFECT THE LOWER LIMBS.

WITHIN recent years some admirable text-books of 'Diseases of the Skin' have been published, and therefore it is unnecessary for me to write about the cutaneous diseases of the leg with descriptive minuteness. On the pathology of those diseases I have really scarcely anything new to communicate; and my apology for giving this chapter at all is, that the therapeutics of the matter appear to me to need improvement, and I have some suggestions to offer which may merit a little attention.

The illustrations of the cutaneous pathology of the leg which I now record will, therefore, bear mainly on the question of medical treatment. Therapeutics will have the first place in the following pages, and only those diseases will be referred to in which the local læsion is the significant thing, and demanding our chief study. I do not propose to discuss points in ætiology, or to determine in every case the precise degree in which deviations from constitutional health may show their influence. The problem for solution will usually be—given a definite and well recognizable example of skin disease of the lower limb, how is it to be most efficiently treated?

The most practical way of examining this subject is to

adopt the classification of Plenck, with the modifications proposed by the illustrious Willan; grafting upon this, again, the amendments dictated by the latest inquiries; and then selecting for notice those disease-forms the management of which seems to require some investigation.

Order I.—EXANTHEMATA.

Genus 1. Erythema.

The first species of *Erythema* on which I have to say something is *E. nodosum*. The constitutional affinities of the disease point to its correct general treatment, and that is by a combination of iron with very mild saline purgatives. I give the following draught three times a day (assuming the absence of all pyrexia):

℞ Magnes. Sulph., ℈j—℥ss;
Ferri Sulph., gr. iij—iv;
Acid. Sulph., dil., ♏v—♏vij;
Tr. Aurant., ♏x;
Aquæ puræ ad ℥j.
M. ft. haust. ter die s. post cibum.

(For a girl æt. 15—20.)

A mild aloetic pill every other night may be necessary also. I have never found any benefit from quinine by itself, but it may be combined with the draught just prescribed. In nearly every case I support the limb with a domette flannel bandage, which may be applied with considerable pressure; and I tell the patient to take plenty of exercise. Every third or fourth day the bandage is removed, and the limb shampooed with a lather of soap and hot water; or better still, a thermal bath is recom-

mended to a patient residing in this city and its immediate neighbourhood.

Young persons suffering from *E. nodosum* require an abundant supply of nitrogenous food. Sea air and sea bathing are often very useful.

E. tuberculatum and *E. papulatum* are merely small patches of *E. nodosum*, and are most common on the back of the leg. They must be treated in the same way.[1]

E. intertrigo on any part of the lower extremities can be cured by benzoated zinc ointment. The bullæ which form on patches of *E. læve* in dropsical limbs, with the occasional sequel of ulceration, ought to be treated like any other ulcer with nitrate of silver lotion, chalk ointment and bandage; no healing process will go on while the limb is swollen with œdema; but further mischief of the same kind may be checked, and sore parts will be protected.

Rheumatic erythema, or *E. circinnatum*, deserves notice because of the comfort given by swathing a limb in a domette flannel bandage when the acute symptoms have passed away.

Order III.—VESICULÆ.

Genus 3. Ekzema.

When the vesicles of ekzema burst, thin scabs cover the inflamed patches. The scabs are composed of "epi-

---

[1] The cold, clammy, purple legs of young women suffering from chlorosis, improve wonderfully under the stimuli of the warmth and pressure of a bandage.

thelium and the fixed constituents of the fluid of the vesicles" (Jenner). The thickness of the scabs depends upon the amount of animal matter which they contain; but they are very rarely more than thin scales, though their colour may be brown or yellow.

Now, I accept this scabbing as a natural method of cure, and I try to assist Nature accordingly. The scabs or scales ought not to be disturbed; they protect the hyperæmic inflammatory cutis, and wait till it is covered by healthy cuticle.

A middle-aged man, a farmer, consulted me for long transverse patches of *E. simplex* on the front of the leg and instep. The health seemed excellent. The patches were washed with a *strong* solution of nitrate of silver (chemical scabbing); they were then covered with the chalk and benzoated zinc ointment spread thickly on very woolly lint; and a domette flannel bandage was applied over all. The dressings were renewed on alternate days; and five drops of *Liquor Arsenicalis* were administered in water every 6 hours. The immediate freedom from pain and worry was very remarkable in this case; and a complete cure was effected in a very short time.

Systematic writers on diseases of the skin have pointed out the frequent connection of ekzema of the leg with varicose veins. Now, *E. rubrum* is not uncommon under these circumstances; and when there is much œdema of the subcutaneous structures as well, we have a specimen of a very ugly bad leg indeed. A large tract of skin may be very hot, red, and spongy; thin serum may steam out at every pore, almost "scalding" the adjacent integument over which it flows, and the helpless state of the limb is

very pitiful to see. If any scales or scabs have ever formed, they have been washed away by the abundance of the alkaline serosity.

To look at this disease is almost to be persuaded that some dreadful poison is working out of the system by the most convenient channel it can find, and that it is our duty to encourage this elimination. A more homely, and probably more truthful, view is based upon the doctrine which Dr. Handfield Jones called "tissue-irritation;" and if the blood is to be blamed, it irritates parts, not because itself unhealthy, but because the tissue has become unduly irritable.

E. rubrum is a disease of the skin very difficult to treat. After many trials of various remedies, I found, some years ago, that the common black wash (*Lotio hydrargyri nigra* of the Ph. B.) is a very effective application. I mix with it a tenth or twelfth part of glycerine by measure, and let it be well shaken. A small quantity of this mixture being poured into a wide shallow vessel (as a saucer), strips of linen rag are soaked in it, and, after being lightly squeezed, are placed even and smoothly round the affected part of the limb, a portion of the black oxide of mercury adhering to the linen. A bandage secures the dressing in its place, and the work is done. It must be repeated twice a day, and if the surgeon does it the first time, the patient will understand its application afterwards. Two precautions are necessary: the dried linen must always be moistened with water before removal, and no impervious covering (such as oil silk) must be placed over it.

Since 1860 I have treated a number of cases by this

simple method, and I have been successful in all but two or three. And the defiant behaviour of these two or three suggested the application of a strong nitrate of solution *before* the linen steeped in black wash was put on, and this plan answered completely. Arsenic should never be prescribed for the early and quasi-inflammatory stage of *E. rubrum;* an effervescing saline draught ought to be given several times a day, and strong purgatives of calomel and colocynth are now and then necessary. Abstinence from alcoholic drinks is most important, and the standard of a "milk diet" should be adhered to as closely as possible.

Continuing to draw from my own observations on the subject of ekzema, I am able to announce the curability of the subacute and more lasting varieties of *E. rubrum* by the application of tar. Indeed, no local remedy can, for an instant, be put into competition with tar ointment, so far as my experience extends. Dr. Hughes Bennett and many foreign writers have advocated the external use of tar in the scaly order of skin diseases; but it was used by my father in certain forms of ekzema fully thirty-three years ago.

By tar ointment I do not mean the dark fiery stuff called by this name in the British Pharmacopœia,[1] but that compound diluted with a large per-centage of chalk ointment and zinc ointment to give it consistence and astringency. These substances ought to be melted together and stirred while cooling; in this way a homo-

[1] In the Hospital for Sick Children, in London, a child was nearly killed by the application of liquid pitch to its scalp.—Holmes' 'System of Surgery,' iv, 722.

geneous ointment of great value is prepared. Spread thickly and evenly on soft lint, it forms a very soothing application; it stops the extension of the skin disease, and a new healthy epidermis forms under the incrustation made by the chalky constituent of the ointment. The dressing of tar ointment just described may be retained on a limb by the domette bandage, and a fresh dressing should be applied every second or third day, according to circumstances.

I use the tar ointment in those varieties of ekzema in which the scales are "thin, white, and opaque," resembling, at the first glance, something wrong belonging to the order *Squamæ*. Detach the scales, however, and there is a moist spongy surface beneath them—a surface which is sometimes *transparently* red and honeycombed, and exuding a scanty thin liquor, which soon dries. But whatever may be the phase assumed by a vesicular or by a squamous disease, the diagnosis is always quickly verified by attention to the point emphasized by Dr. Tilbury Fox. "Search out its history," he says, "for any appearance of *moisture;* the existence of this at any stage determines its classification in a moment."

Arsenic may be administered almost always with benefit in chronic ekzema, and a generally tonic regimen is desirable. The external application of the Bath thermal waters is useful in many cases of the drier forms of ekzema.

Genus 4. Herpes.

I speak of herpes because I have just seen (April 27, 1868) a case of *H. zöster* on the outside, front, and inside

of the thigh of a gentleman residing in a healthy town about fifteen miles from Bath. The patches on the outside of the limb were small and ill-defined, and did not look like herpes at all; but there was a very distinctive group on the inside of the thigh (only two inches above the knee), on which the vesicles were in the opalescent stage, and which were very characteristic of the disease. There was a history of severe pains all over the thigh, which were, of course, ascribed to "rheumatism," for some weeks anterior to the appearance of the skin affection. I have never seen a cluster of herpetic vesicles so near the knee before; *H. zöster* on the outside of the buttock and thigh is common enough, and several severe cases have come under my care.

A combination of quinine and arsenic has always served me well in the early neuralgic stage of *H. zöster*;[1] and iron and cod-liver oil in the later stage. When the neurosis is very severe, the pain is generally relieved by blisters applied on the side of the spinal column corresponding to the seat of the disease. Locally, I apply benzoated zinc ointment spread on lint; and sometimes, before this, a strong solution of nitrate of silver (ʒss to ℥j of distilled water).

Digressing for a moment from the region of the lower limbs, I may observe that the obstinate ulcers left sometimes on the side of the trunk after an outbreak of *H.*

---

[1] In one happy case, that of an old Indian officer, I realized the abortive treatment of *H. zöster*, by giving large doses of quinine and arsenic four times a day in the early neuralgic stage. Small crops of vesicles formed on one side of the thorax, but they actually died away before coalescing into opalescent patches.

zöster, can generally be coaxed to heal by being covered with chalk ointment.

The relation of ulcer to neurosis has been well illustrated by Dr. Anstie.[1] Among other curiosities of this subject may be specified the formation of *bullæ* on the calf of the leg after chronic sciatic pain, and the cicatrization of the ulcers left by these bullæ is difficult, if not impossible, so long as the neuralgia persists.

Order IV.—BULLÆ.

Genus 1. Pemphigus.

What is the best treatment of multiple pemphigus on the leg? I puncture each bulla with a tenaculum needle, wash it with a weak solution of nitrate of silver, and then dress it with the chalk ointment in the way so often described in this work. The principle of *scabbing* operates in the cure of pemphigus more than in any other disease of the skin. The raised cuticle is hardened by the lotion, and then the ointment comes to form an earthy layer over it, and strengthens the protection afforded to the red and tender cutis. Merely dusting the part with flour acts in the same way; and a case of acute febrile pemphigus, recently under the joint care of Dr. Tunstall and myself, was thus treated in the Bath Mineral Water Hospital.

The internal treatment is important. Sir W. Jenner says

---

[1] Reynolds' 'System of Medicine,' ii, 739.

that arsenic "exerts little or no influence."[1] Mr. Jonathan Hutchinson's evidence is equally positive on the other side,[2] and I quite agree with him. My own practice is always to give arsenic (and usually with iron) for pemphigus occurring at any age, and I am very seldom disappointed. Cod-liver oil is often of much service, especially in children and old people.

P. solitarius is a disease of advanced life, and occurs on the skin over the middle of the tibia, and on the upper surface of the foot. The pain is variously described as "itching" and "burning." The bulla is often very large, and the tension extreme; finally it bursts, and leaves a red raw surface which may be three or four inches in diameter.

The wife of a tradesman, in her seventy-eighth year, is now under my charge for this affection. The under part of the foot is covered with purple patches, and there is an ugly look of threatening senile gangrene. The pain in the limb is sometimes severe. I have treated each bulla in the manner already described; and the health is sufficiently improved to justify a hope that no fresh bullæ will form.

Genus 2. Rupia.

The ulceration left after all the varieties of rupia, when situated on the limbs, is to be treated according to the directions given for pemphigus. The scabs should never

---

[1] Holmes' 'System of Surgery,' iv, 735.

[2] 'London Hospital Medical Reports,' i, 169.

be artificially removed.[1] As a true syphilide, a "specific" internal treatment is necessary.

Order VIII.—SQUAMÆ.

Genus 2. Psoriasis.[2]

The grand treatment of all the varieties of non-syphilitic psoriasis is by the internal administration of arsenic. Admitting this, there are many cases the cure of which is greatly promoted by two auxiliaries—(*a*) the external use of diluted tar ointment;[3] (*b*) the periodical soaking of an affected part in the Bath thermal waters.

With respect to the tar ointment, I restrict its use to psoriasis on a *limb*, as only on a limb can the dressings be conveniently retained. To anoint a whole body with this application is such a dirty development of therapeutics, that few persons care to submit to it until all the subtleties of internal medication have been tried without benefit. There is no external remedy equal to tar, but creasote ointment can be employed with moderate success when the odour of tar is very objectionable. The *Unguen-*

---

[1] On this point I am sorry to be at direct issue with so high an authority as Sir W. Jenner.

[2] I join in Dr. McCall Anderson's regrets that so accomplished an author as Mr. Erasmus Wilson should, apparently in obedience to verbal theories, have introduced confusion into dermatological classification by attaching the name of *psoriasis* to chronic inveterate ekzema, and calling what other pathologists name psoriasis by the title of *lepra*. Unanimity in these matters is a great virtue, for the sake of practitioners as well as students.

[3] Prepared as directed on a previous page.

tum Hydrargyri Nitratis is sometimes very efficacious, but it ought always to be largely diluted.

Mr. Erasmus Wilson proposes to call the cutaneous manifestation of syphilis which is called psoriasis "syphiloderma squamosum." There are philosophical reasons for a terminology of this kind; for, as he says, "that which is called lepra is not a lepra, but a syphilis resembling a lepra."[1] I need not here recapitulate the classical points of diagnosis by which an eruption can be pronounced to be syphilitic or non-syphilitic; but it may be asserted with scarcely any qualification that, when something which looks like psoriasis is seen on the sole of the foot, it has a syphilitic origin. And we shall naturally try to confirm this supposition by inquiring after nodes, ulcerations, and glandular enlargements elsewhere.

Assuming, now, that I have before me a squamous syphilide anywhere on the lower limb, I treat it by the internal administration of the soluble (so-called) biniodide of mercury, prepared according to Dr. Fuller's directions given in a former part of this work. I wish to speak in the most emphatic manner of the potency of this medicine in curing the syphilodermata;[2] and its effects are most

---

[1] 'Journal of Cutaneous Medicine,' No. V, p. 81.

[2] I abstain from entering into any discussion about the efficacy of mercury in syphilis. But my short and simple creed is this—I should as much think of doubting the power of opium to produce narcosis, or the certainty of chloroform vapour to produce anæsthesia, as the virtue of mercury in syphilitic diseases, when discreetly administered. I do not think Sir W. Jenner's words a bit too strong when he says that if a child dies from the effects of congenital syphilis, and mercury has been withheld, it is something like *murder*. To doubt at all upon such a vital question is one of the scandals of Therapeutics.

positive and unerring in the squamous forms. A married woman, of middle age, came under my care at the Eastern Dispensary, Bath, about four months ago, having contracted syphilis from a vagabond husband. I found her suffering from severe iritis, a rose-red erythema on the face, and "psoriasis" nearly all over the rest of the skin, but chiefly on the extremities. She had been under professional treatment in Wales, but was still in a very wretched plight. In less than a month it is no exaggeration to say that she was, for a time, free from all her troubles. Now mark the sequel. She discontinued attendance too soon, and had a relapse of severe iritis, with a slight return of the malady of the skin. Thinking most of the iritis, I prescribed ordinary grey powder in doses sufficient (as I hoped) to control it. There was not only no improvement in the eye, but the "psoriasis" *went on increasing all the time.* And so I went back to my old friend the soluble biniodide of mercury (combined with morphia to prevent purging), with the same perfect result; and, under pain of dismissal, the patient will now take it for a period which I may judge long enough for the permanent cure that I have in view.

In doubtful cases (only the empiric never doubts), when it is not quite clear whether we have a syphilide to deal with or not, it is good practice to administer arsenic in orthodox doses in union with bichloride of mercury. "Donovan's Solution" is often valuable.

I have now touched briefly on the therapeutics of certain common diseases of the skin of the lower limbs. For each of these diseases a multitude of authentic remedies have been proposed by the great masters of

Dermatology; it must not be imagined that I disparage those remedies because I do not mention them. Such a crowd of things, alleged to be able to cure the simplest structural læsion, is almost bewildering. We may wish that some principles, broad and defined, might govern our methods of treating skin diseases; even as the anatomy and pathology of those diseases are built now upon principles so intelligent and correct. And there is abundant reason for enlarged therapeutic study. Knowledge of the specific properties of any article in the *Materia Medica,* or of any compound in the *Pharmacopœia,* confers upon us a power which is equivalent to enhanced skill in diagnosis. In practice it will be found that ignorance of the curative properties of a medicine is occasionally more disadvantageous than absolute error in the discrimination of disease. Bring before me a special disease begging for its own special remedy; now, if I do not know that remedy, or how to apply it, the patient must linger with his trouble unrelieved, and my own remedial skill undeclared. Another medical man may perform a complete cure; and immediately every tribute is paid to his supposed superior diagnostic ability, though his success is due to a lucky discovery, or to a more intimate acquaintance with the past and the present literature of Medicine.

The current of medical thought is turning this way. Earnest workers are trying to elevate Therapeutics to the rank of positive Science. "Concerning the peculiar virtue and specific agency of medicines," says Sir Thomas Watson, "we want sound and multiplied experience." And the required knowledge must needs be gathered "by many hands."

London, New Burlington Street,
December, 1867.

MESSRS. CHURCHILL & SONS'

Publications,

IN

MEDICINE

AND THE VARIOUS BRANCHES OF

NATURAL SCIENCE.

"It would be unjust to conclude this notice without saying a few words in favour of Mr. Churchill, from whom the profession is receiving, it may be truly said, the most beautiful series of Illustrated Medical Works which has ever been published."—*Lancet.*

"All the publications of Mr. Churchill are prepared with so much taste and neatness, that it is superfluous to speak of them in terms of commendation."—*Edinburgh Medical and Surgical Journal.*

"No one is more distinguished for the elegance and *recherché* style of his publications than Mr. Churchill."—*Provincial Medical Journal.*

"The name of Churchill has long been a guarantee for the excellence of illustrated works, and it would be superfluous to repeat the admiration that we have several times expressed in this respect, of the spirit with which this firm engages in these costly but valuable series."—*Medical Press and Circular.*

"The typography, illustrations, and getting up are, in all Mr. Churchill's publications, most beautiful."—*Monthly Journal of Medical Science.*

"Mr. Churchill's illustrated works are among the best that emanate from the Medical Press."—*Medical Times.*

"We have before called the attention of both students and practitioners to the great advantage which Mr. Churchill has conferred on the profession, in the issue, at such a moderate cost, of works so highly creditable in point of artistic execution and scientific merit."—*Dublin Quarterly Journal.*

A CLASSIFIED INDEX

TO

MESSRS. CHURCHILL & SONS' CATALOGUE.

ANATOMY.

CHEMISTRY.

CLIMATE.

DEFORMITIES, &c.

DISEASES OF WOMEN AND CHILDREN.

GENERATIVE ORGANS, Diseases of, and SYPHILIS.

HYGIENE.

HYGIENE—*continued.*

MATERIA MEDICA and PHARMACY.

MEDICINE.

MEDICINE—*continued.*

MICROSCOPE.

MISCELLANEOUS.

MISCELLANEOUS—*cont^d.*

NERVOUS DISORDERS AND INDIGESTION.

OBSTETRICS.

OPHTHALMOLOGY.

OPHTHALMOLOGY—*cont^d.*

PHYSIOLOGY.

PSYCHOLOGY.

PULMONARY and CHEST DISEASES, &c.

RENAL and URINARY DISEASES.

SCIENCE.

SURGERY.

SURGERY—*continued.*

VETERINARY MEDICINE.

MR. ACTON, M.R.C.S.

I.

A PRACTICAL TREATISE ON DISEASES OF THE URINARY AND GENERATIVE ORGANS IN BOTH SEXES. Third Edition. 8vo. cloth, £1. 1*s*. With Plates, £1. 11*s*. 6*d*. The Plates alone, limp cloth, 10*s*. 6*d*.

II.

THE FUNCTIONS AND DISORDERS OF THE REPRODUCTIVE ORGANS IN CHILDHOOD, YOUTH, ADULT AGE, AND ADVANCED LIFE, considered in their Physiological, Social, and Moral Relations. Fourth Edition. 8vo. cloth, 10*s*. 6*d*.

III.

PROSTITUTION: Considered in its Moral, Social, and Sanitary Bearings, with a View to its Amelioration and Regulation. 8vo. cloth, 10*s*. 6*d*.

DR. ADAMS, A.M.

A TREATISE ON RHEUMATIC GOUT; OR, CHRONIC RHEUMATIC ARTHRITIS. 8vo. cloth, with a Quarto Atlas of Plates, 21*s*.

MR. WILLIAM ADAMS, F.R.C.S.

I.

ON THE PATHOLOGY AND TREATMENT OF LATERAL AND OTHER FORMS OF CURVATURE OF THE SPINE. With Plates. 8vo. cloth, 10*s*. 6*d*.

II.

CLUBFOOT: its Causes, Pathology, and Treatment. Jacksonian Prize Essay for 1864. With 100 Engravings. 8vo. cloth, 12*s*.

III.

ON THE REPARATIVE PROCESS IN HUMAN TENDONS AFTER SUBCUTANEOUS DIVISION FOR THE CURE OF DEFORMITIES. With Plates. 8vo. cloth, 6*s*.

IV.

SKETCH OF THE PRINCIPLES AND PRACTICE OF SUBCUTANEOUS SURGERY. 8vo. cloth, 2*s*. 6*d*.

DR. WILLIAM ADDISON, F.R.S.

I.

CELL THERAPEUTICS. 8vo. cloth, 4*s*.

II.

ON HEALTHY AND DISEASED STRUCTURE, AND THE TRUE PRINCIPLES OF TREATMENT FOR THE CURE OF DISEASE, ESPECIALLY CONSUMPTION AND SCROFULA, founded on MICROSCOPICAL ANALYSIS. 8vo. cloth, 12*s*.

DR. ALDIS.

AN INTRODUCTION TO HOSPITAL PRACTICE IN VARIOUS COMPLAINTS; with Remarks on their Pathology and Treatment. 8vo. cloth, 5*s*. 6*d*.

DR. SOMERVILLE SCOTT ALISON, M.D.EDIN., F.R.C.P.

THE PHYSICAL EXAMINATION OF THE CHEST IN PULMONARY CONSUMPTION, AND ITS INTERCURRENT DISEASES. With Engravings. 8vo. cloth, 12*s*.

DR. ALTHAUS, M.D., M.R.C.P.

ON EPILEPSY, HYSTERIA, AND ATAXY. Cr. 8vo. cloth, 4*s*.

THE ANATOMICAL REMEMBRANCER; OR, COMPLETE POCKET ANATOMIST. Sixth Edition, carefully Revised. 32mo. cloth, 3*s*. 6*d*.

DR. MOCALL ANDERSON, M.D.

I.

PARASITIC AFFECTIONS OF THE SKIN. With Engravings. 8vo. cloth, 5*s*.

II.

ECZEMA. Second Edition. 8vo. cloth, 6*s*.

III.

PSORIASIS AND LEPRA. With Chromo-lithograph. 8vo. cloth, 5*s*.

DR. ANDREW ANDERSON, M.D.

TEN LECTURES INTRODUCTORY TO THE STUDY OF FEVER. Post 8vo. cloth, 5*s*.

DR. THOMAS ANDERSON, M.D.

HANDBOOK FOR YELLOW FEVER: ITS PATHOLOGY AND TREATMENT. To which is added a brief History of Cholera, and a method of Cure. Fcap. 8vo. cloth, 3*s*.

DR. ARLIDGE.

ON THE STATE OF LUNACY AND THE LEGAL PROVISION FOR THE INSANE; with Observations on the Construction and Organisation of Asylums. 8vo. cloth, 7*s*.

DR. ALEXANDER ARMSTRONG, R.N.

OBSERVATIONS ON NAVAL HYGIENE AND SCURVY, More particularly as the latter appeared during a Polar Voyage. 8vo. cloth, 5*s*.

MR. T. J. ASHTON.

I.

ON THE DISEASES, INJURIES, AND MALFORMATIONS OF THE RECTUM AND ANUS. Fourth Edition. 8vo. cloth, 8*s*.

II.

PROLAPSUS, FISTULA IN ANO, AND HÆMORRHOIDAL AFFECTIONS; their Pathology and Treatment. Second Edition. Post 8vo. cloth 2*s*. 6*d*

MR. W. B. ASPINALL.

SAN REMO AS A WINTER RESIDENCE. With Coloured Plates. Foolscap 8vo. cloth, 4*s*. 6*d*.

MR. THOS. J. AUSTIN, M.R.C.S.ENG.

A PRACTICAL ACCOUNT OF GENERAL PARALYSIS: Its Mental and Physical Symptoms, Statistics, Causes, Seat, and Treatment. 8vo. cloth, 6

DR. THOMAS BALLARD, M.D.

A NEW AND RATIONAL EXPLANATION OF THE DISEASES PECULIAR TO INFANTS AND MOTHERS; with obvious Suggestion for their Prevention and Cure. Post 8vo. cloth, 4*s*. 6*d*.

DR. BARCLAY.

I.

A MANUAL OF MEDICAL DIAGNOSIS. Second Edition. Foolscap 8vo. cloth, 8*s.* 6*d.*

II.

MEDICAL ERRORS.—Fallacies connected with the Application of the Inductive Method of Reasoning to the Science of Medicine. Post 8vo. cloth, 5*s.*

III.

GOUT AND RHEUMATISM IN RELATION TO DISEASE OF THE HEART. Post 8vo. cloth, 5*s.*

DR. T. HERBERT BARKER, M.D., F.R.S., & MR. ERNEST EDWARDS, B.A.

PHOTOGRAPHS OF EMINENT MEDICAL MEN, with brief Analytical Notices of their Works. Vol. I. (24 Portraits), 4to. cloth, 24*s.*

DR. W. G. BARKER, M.D.LOND.

I.

ON DISEASES OF THE RESPIRATORY PASSAGES AND LUNGS, SPORADIC AND EPIDEMIC; their *Causes*, Pathology, Symptoms, and Treatment. Crown 8vo. cloth, 6*s.*

II.

THE CLIMATE OF WORTHING: its Remedial Influence in Disease, especially of the Lungs. Second Edition. Crown 8vo. clo h, 3*s.*

DR. BARLOW.

A MANUAL OF THE PRACTICE OF MEDICINE. Second Edition. Fcap. 8vo. cloth, 12*s.* 6*d.*

DR. BARNES.

THE PHYSIOLOGY AND TREATMENT OF PLACENTA PRÆVIA; being the Lettsomian Lectures on Midwifery for 1857. Post 8vo. cloth, 6*s.*

DR. BASCOME.

A HISTORY OF EPIDEMIC PESTILENCES, FROM THE EARLIEST AGES. 8vo. cloth, 8*s.*

DR. BASHAM.

ON DROPSY, AND ITS CONNECTION WITH DISEASES OF THE KIDNEYS, HEART, LUNGS AND LIVER. With 16 Plates. Third Edition. 8vo. cloth, 12*s.* 6*d.*

MR. H. F. BAXTER, M.R.C.S.L.

ON ORGANIC POLARITY; showing a Connexion to exist between Organic Forces and Ordinary Polar Forces. Crown 8vo. cloth, 5*s.*

MR. BATEMAN.

MAGNACOPIA: A Practical Library of Profitable Knowledge, communicating the general Minutiæ of Chemical and Pharmaceutic Routine, together with the generality of Secret Forms of Preparations. Third Edition. 18mo. 6*s.*

MR. LIONEL J. BEALE, M.R.C.S.

I.

THE LAWS OF HEALTH IN THEIR RELATIONS TO MIND AND BODY. A Series of Letters from an Old Practitioner to a Patient. Post 8vo. cloth, 7*s.* 6*d.*

II.

HEALTH AND DISEASE, IN CONNECTION WITH THE GENERAL PRINCIPLES OF HYGIENE. Fcap. 8vo., 2*s.* 6*d.*

DR. BEALE, F.R.S.

I.

URINE, URINARY DEPOSITS, AND CALCULI: and on the Treatment of Urinary Diseases. Numerous Engravings. Second Edition, much Enlarged. Post 8vo. cloth, 8*s.* 6*d.*

II.

THE MICROSCOPE, IN ITS APPLICATION TO PRACTICAL MEDICINE. Third Edition. With 58 Plates. 8vo. cloth, 16*s.*

III.

ILLUSTRATIONS OF THE SALTS OF URINE, URINARY DEPOSITS, and CALCULI. 37 Plates, containing upwards of 170 Figures copied from Nature, with descriptive Letterpress. 8vo. cloth, 9*s.* 6*d.*

MR. BEASLEY.

I.

THE BOOK OF PRESCRIPTIONS; containing 3000 Prescriptions. Collected from the Practice of the most eminent Physicians and Surgeons, English and Foreign. Third Edition. 18mo. cloth, 6*s.*

II.

THE DRUGGIST'S GENERAL RECEIPT-BOOK: comprising a copious Veterinary Formulary and Table of Veterinary Materia Medica; Patent and Proprietary Medicines, Druggists' Nostrums, &c.; Perfumery, Skin Cosmetics, Hair Cosmetics, and Teeth Cosmetics; Beverages, Dietetic Articles, and Condiments; Trade Chemicals, Miscellaneous Preparations and Compounds used in the Arts, &c.; with useful Memoranda and Tables. Sixth Edition. 18mo. cloth, 6*s.*

III.

THE POCKET FORMULARY AND SYNOPSIS OF THE BRITISH AND FOREIGN PHARMACOPŒIAS; comprising standard and approved Formulæ for the Preparations and Compounds employed in Medical Practice. Eighth Edition, corrected and enlarged. 18mo. cloth, 6*s.*

DR. HENRY BENNET.

I.

A PRACTICAL TREATISE ON INFLAMMATION AND OTHER DISEASES OF THE UTERUS. Fourth Edition, revised, with Additions. 8vo. cloth, 16*s.*

II.

A REVIEW OF THE PRESENT STATE (1856) OF UTERINE PATHOLOGY. 8vo. cloth, 4*s.*

III.

WINTER IN THE SOUTH OF EUROPE; OR, MENTONE, THE RIVIERA, CORSICA, SICILY, AND BIARRITZ, AS WINTER CLIMATES. Third Edition, with numerous Plates, Maps, and Wood Engravings. Post 8vo. cloth, 10*s.* 6*d.*

PROFESSOR BENTLEY, F.L.S.

A MANUAL OF BOTANY. With nearly 1,200 Engravings on Wood. Fcap. 8vo. cloth, 12*s.* 6*d.*

R. BERNAYS.

NOTES FOR STUDENTS IN CHEMISTRY; being a Syllabus compiled from the Manuals of Miller, Fownes, Berzelius, Gerhardt, Gorup-Besanez, &c. Fourth Edition. Fscap. 8vo. cloth, 3*s.*

MR. HENRY HEATHER BIGG.

ORTHOPRAXY: the Mechanical Treatment of Deformities, Debilities, and Deficiencies of the Human Frame. With Engravings. Post 8vo. cloth, 10*s.*

DR. BILLING, F.R.S.

ON DISEASES OF THE LUNGS AND HEART. 8vo. cloth, 6*s.*

DR. S. B. BIRCH, M.D.

CONSTIPATED BOWELS: the Various Causes and the Rational Means of Cure. Second Edition. Post 8vo. cloth, 3*s.* 6*d.*

DR. GOLDING BIRD, F.R.S.

URINARY DEPOSITS; THEIR DIAGNOSIS, PATHOLOGY, AND THERAPEUTICAL INDICATIONS. With Engravings. Fifth Edition. Edited by E. Lloyd Birkett, M.D. Post 8vo. cloth, 10*s.* 6*d.*

MR. BISHOP, F.R.S.

I.

ON DEFORMITIES OF THE HUMAN BODY, their Pathology and Treatment. With Engravings on Wood. 8vo. cloth, 10*s.*

II.

ON ARTICULATE SOUNDS, AND ON THE CAUSES AND CURE OF IMPEDIMENTS OF SPEECH. 8vo. cloth, 4*s.*

MR. P. HINCKES BIRD, F.R.C.S.

PRACTICAL TREATISE ON THE DISEASES OF CHILDREN AND INFANTS AT THE BREAST. Translated from the French of M. Bouchut, with Notes and Additions. 8vo. cloth. 20*s.*

MR. BLAINE.

OUTLINES OF THE VETERINARY ART; OR, A TREATISE ON THE ANATOMY, PHYSIOLOGY, AND DISEASES OF THE HORSE, NEAT CATTLE, AND SHEEP. Seventh Edition. By Charles Steel, M.R.C.V.S.L. With Plates. 8vo. cloth, 18*s.*

MR. BLOXAM.

CHEMISTRY, INORGANIC AND ORGANIC; with Experiments and a Comparison of Equivalent and Molecular Formulæ. With 276 Engravings on Wood. 8vo. cloth, 16*s.*

DR. BOURGUIGNON.

ON THE CATTLE PLAGUE; OR, CONTAGIOUS TYPHUS IN HORNED CATTLE: its History, Origin, Description, and Treatment. Post 8vo. 5*s.*

MR. JOHN E. BOWMAN, & MR. C. L. BLOXAM.

I.

PRACTICAL CHEMISTRY, including Analysis. With numerous Illustrations on Wood. Fifth Edition. Foolscap 8vo. cloth, 6*s.* 6*d.*

II.

MEDICAL CHEMISTRY; with Illustrations on Wood. Fourth Edition, carefully revised. Fcap. 8vo. cloth, 6*s.* 6*d.*

DR. JAMES BRIGHT.

ON DISEASES OF THE HEART, LUNGS, & AIR PASSAGES: with a Review of the several Climates recommended in these Affections. Third Edition. Post 8vo. cloth, 9*s.*

DR. BRINTON, F.R.S.

I.

THE DISEASES OF THE STOMACH, with an Introduction on its Anatomy and Physiology; being Lectures delivered at St. Thomas's Hospital. Second Edition. 8vo. cloth, 10*s.* 6*d.*

II.

INTESTINAL OBSTRUCTION. Edited by DR. BUZZARD. Post 8vo. cloth, 5*s.*

MR. BERNARD E. BRODHURST, F.R.C.S.

I.

CURVATURES OF THE SPINE: their Causes, Symptoms, Pathology, and Treatment. Second Edition. Roy. 8vo. cloth, with Engravings, 7*s.* 6*d.*

II.

ON THE NATURE AND TREATMENT OF CLUBFOOT AND ANALOGOUS DISTORTIONS involving the TIBIO-TARSAL ARTICULATION. With Engravings on Wood. 8vo. cloth, 4*s.* 6*d.*

III.

PRACTICAL OBSERVATIONS ON THE DISEASES OF THE JOINTS INVOLVING ANCHYLOSIS, and on the TREATMENT for the RESTORATION of MOTION. Third Edition, much enlarged, 8vo. cloth, 4*s.* 6*d.*

MR. BROOKE, M.A., M.B., F.R.S.

ELEMENTS OF NATURAL PHILOSOPHY. Based on the Work of the late Dr. Golding Bird. Sixth Edition. With 700 Engravings. Fcap. 8vo. cloth, 12*s.* 6*d.*

MR. THOMAS BRYANT, F.R.C.S.

I.

ON THE DISEASES AND INJURIES OF THE JOINTS. CLINICAL AND PATHOLOGICAL OBSERVATIONS. Post 8vo. cloth, 7*s.* 6*d.*

II.

THE SURGICAL DISEASES OF CHILDREN. The Lettsomian Lectures, delivered March, 1863. Post 8vo. cloth, 5*s.*

III.

CLINICAL SURGERY. Parts I. to VII. 8vo., 3*s.* 6*d.* each.

DR. BUCKE, M.D., L.R.C.P.LOND.

VITAL AND ECONOMICAL STATISTICS OF THE HOSPITALS, INFIRMARIES, &c., OF ENGLAND AND WALES. Royal 8vo. 5*s.*

DR. JOHN CHARLES BUCKNILL, F.R.S., & DR. DANIEL H. TUKE.

A MANUAL OF PSYCHOLOGICAL MEDICINE: containing the History, Nosology, Description, Statistics, Diagnosis, Pathology, and Treatment of Insanity. Second Edition. 8vo. cloth, 15*s.*

DR. BUDD, F.R.S.

I.

ON DISEASES OF THE LIVER.

Illustrated with Coloured Plates and Engravings on Wood. Third Edition. 8vo. cloth, 16*s.*

II.

ON THE ORGANIC DISEASES AND FUNCTIONAL DISORDERS OF THE STOMACH. 8vo. cloth, 9*s.*

MR. CALLENDER, F.R.C.S.

FEMORAL RUPTURE: Anatomy of the Parts concerned. With Plates. 8vo. cloth, 4*s.*

DR. JOHN M. CAMPLIN, F.L.S.

ON DIABETES, AND ITS SUCCESSFUL TREATMENT. Third Edition, by Dr. Glover. Fcap. 8vo. cloth, 3*s.* 6*d.*

MR. ROBERT B. CARTER, M.R.C.S.

I.

ON THE INFLUENCE OF EDUCATION AND TRAINING IN PREVENTING DISEASES OF THE NERVOUS SYSTEM. Fcap. 8vo., 6*s.*

II.

THE PATHOLOGY AND TREATMENT OF HYSTERIA. Post 8vo. cloth, 4*s.* 6*d.*

DR. CARPENTER, F.R.S.

I.

PRINCIPLES OF HUMAN PHYSIOLOGY. With numerous Illustrations on Steel and Wood. Sixth Edition. Edited by Mr. HENRY POWER. 8vo. cloth, 26*s.*

II.

A MANUAL OF PHYSIOLOGY. With 252 Illustrations on Steel and Wood. Fourth Edition. Fcap. 8vo. cloth, 12*s.* 6*d.*

III.

THE MICROSCOPE AND ITS REVELATIONS. With numerous Engravings on Steel and Wood. Third Edition. Fcap. 8vo. cloth, 12*s.* 6*d.*

MR. JOSEPH PEEL CATLOW, M.R.C.S.

ON THE PRINCIPLES OF ÆSTHETIC MEDICINE; or the Natural Use of Sensation and Desire in the Maintenance of Health and the Treatment of Disease. 8vo. cloth, 9*s.*

R. CHAMBERS.

I.

LECTURES, CHIEFLY CLINICAL. Fourth Edition. 8vo. cloth, 14*s.*

II.

THE INDIGESTIONS OR DISEASES OF THE DIGESTIVE ORGANS FUNCTIONALLY TREATED. Second Edition. 8vo. cloth, 10*s.* 6*d.*

III.

SOME OF THE EFFECTS OF THE CLIMATE OF ITALY. Crown 8vo. cloth, 4*s.* 6*d.*

R. CHANCE, M.B.

VIRCHOW'S CELLULAR PATHOLOGY, AS BASED UPON PHYSIOLOGICAL AND PATHOLOGICAL HISTOLOGY. With 144 Engravings on Wood. 8vo. cloth, 16*s.*

MR. H. T. CHAPMAN, F.R.C.S.

I.

THE TREATMENT OF OBSTINATE ULCERS AND CUTANEOUS ERUPTIONS OF THE LEG WITHOUT CONFINEMENT. Third Edition. Post 8vo. cloth, 3*s.* 6*d.*

II.

VARICOSE VEINS: their Nature, Consequences, and Treatment, Palliative and Curative. Second Edition. Post 8vo. cloth, 3*s.* 6*d.*

MR. PYE HENRY CHAVASSE, F.R.C.S.

I.

ADVICE TO A MOTHER ON THE MANAGEMENT OF HER CHILDREN. Eighth Edition. Foolscap 8vo., 2*s.* 6*d.*

II.

ADVICE TO A WIFE ON THE MANAGEMENT OF HER OWN HEALTH. With an Introductory Chapter, especially addressed to a Young Wife. Seventh Edition. Fcap. 8vo., 2*s.* 6*d.*

MR. LE GROS CLARK, F.R.C.S

OUTLINES OF SURGERY; being an Epitome of the Lectures on the Principles and the Practice of Surgery, delivered at St. Thomas's Hospital. Fcap. 8vo. cloth, 5*s.*

MR. JOHN CLAY, M.R.C.S.

KIWISCH ON DISEASES OF THE OVARIES: Translated, by permission, from the last German Edition of his Clinical Lectures on the Special Pathology and Treatment of the Diseases of Women. With Notes, and an Appendix on the Operation of Ovariotomy. Royal 12mo. cloth, 16*s.*

DR. COCKLE, M.D.

ON INTRA-THORACIC CANCER. 8vo. 6*s.* 6*d.*

MR. COLLIS, M.B.DUB., F.R.C.S.I.

THE DIAGNOSIS AND TREATMENT OF CANCER AND THE TUMOURS ANALOGOUS TO IT. With coloured Plates. 8vo. cloth, 14*s.*

DR. CONOLLY.

THE CONSTRUCTION AND GOVERNMENT OF LUNATIC ASYLUMS AND HOSPITALS FOR THE INSANE. With Plans. Post 8vo. cloth, 6*s.*

MR. COOLEY.

COMPREHENSIVE SUPPLEMENT TO THE PHARMACOPŒIAS.

THE CYCLOPÆDIA OF PRACTICAL RECEIPTS, PROCESSES, AND COLLATERAL INFORMATION IN THE ARTS, MANUFACTURES, PROFESSIONS, AND TRADES, INCLUDING MEDICINE, PHARMACY, AND DOMESTIC ECONOMY; designed as a General Book of Reference for the Manufacturer, Tradesman, Amateur, and Heads of Families. Fourth and greatly enlarged Edition, 8vo. cloth, 28*s.*

MR. W. WHITE COOPER.

I.

ON WOUNDS AND INJURIES OF THE EYE. Illustrated by 17 Coloured Figures and 41 Woodcuts. 8vo. cloth, 12*s.*

II.

ON NEAR SIGHT, AGED SIGHT, IMPAIRED VISION, AND THE MEANS OF ASSISTING SIGHT. With 31 Illustrations on Wood. Second Edition. Fcap. 8vo. cloth, 7*s.* 6*d.*

SIR ASTLEY COOPER, BART., F.R.S.

ON THE STRUCTURE AND DISEASES OF THE TESTIS.

With 24 Plates. Second Edition. Royal 4to., 20*s.*

MR. COOPER.

A DICTIONARY OF PRACTICAL SURGERY AND ENCYCLOPÆDIA OF SURGICAL SCIENCE.

New Edition, brought down to the present time. By SAMUEL A. LANE, F.R.C.S., assisted by various eminent Surgeons. Vol. I., 8vo. cloth, £1. 5*s.*

MR. HOLMES COOTE, F.R.C.S.

A REPORT ON SOME IMPORTANT POINTS IN THE TREATMENT OF SYPHILIS.

8vo. cloth, 5*s.*

DR. COTTON.

PHTHISIS AND THE STETHOSCOPE; OR, THE PHYSICAL SIGNS OF CONSUMPTION.

Third Edition. Foolscap 8vo. cloth, 3*s.*

MR. COULSON.

I.

ON DISEASES OF THE BLADDER AND PROSTATE GLAND.

New Edition, revised. *In Preparation.*

II.

ON LITHOTRITY AND LITHOTOMY;

with Engravings on Wood. 8vo. cloth, 8*s.*

MR. WILLIAM CRAIG, L.F.P.S., GLASGOW.

ON THE INFLUENCE OF VARIATIONS OF ELECTRIC TENSION AS THE REMOTE CAUSE OF EPIDEMIC AND OTHER DISEASES.

8vo. cloth, 10*s.*

MR. CURLING, F.R.S.

I.

OBSERVATIONS ON DISEASES OF THE RECTUM.

Third Edition. 8vo. cloth, 7*s.* 6*d.*

II.

A PRACTICAL TREATISE ON DISEASES OF THE TESTIS, SPERMATIC CORD, AND SCROTUM.

Third Edition, with Engravings. 8vo. cloth, 16*s.*

DR. DALRYMPLE, M.R.C.P., F.R.C.S.

THE CLIMATE OF EGYPT: METEOROLOGICAL AND MEDICAL OBSERVATIONS, with Practical Hints for Invalid Travellers.

Post 8vo. cloth, 4*s.*

MR. JOHN DALRYMPLE, F.R.S., F.R.C.S.

PATHOLOGY OF THE HUMAN EYE.

Complete in Nine Fasciculi: imperial 4to., 20*s.* each; half-bound morocco, gilt tops, 9*l.* 15*s.*

DR. HERBERT DAVIES.

ON THE PHYSICAL DIAGNOSIS OF DISEASES OF THE LUNGS AND HEART.

Second Edition. Post 8vo. cloth, 8*s.*

DR. DAVEY.

I.

THE GANGLIONIC NERVOUS SYSTEM: its Structure, Functions, and Diseases. 8vo. cloth, 9*s*.

II.

ON THE NATURE AND PROXIMATE CAUSE OF INSANITY. Post 8vo. cloth, 3*s*.

DR. HENRY DAY, M.D., M.R.C.P.

CLINICAL HISTORIES; with Comments. 8vo. cloth, 7*s*. 6*d*.

MR. DIXON.

A GUIDE TO THE PRACTICAL STUDY OF DISEASES OF THE EYE. Third Edition. Post 8vo. cloth, 9*s*.

DR. DOBELL.

I.

DEMONSTRATIONS OF DISEASES IN THE CHEST, AND THEIR PHYSICAL DIAGNOSIS. With Coloured Plates. 8vo. cloth, 12*s*. 6*d*.

II.

LECTURES ON THE GERMS AND VESTIGES OF DISEASE, and on the Prevention of the Invasion and Fatality of Disease by Periodical Examinations. 8vo. cloth, 6*s*. 6*d*.

III.

ON TUBERCULOSIS: ITS NATURE, CAUSE, AND TREATMENT; with Notes on Pancreatic Juice. Second Edition. Crown 8vo. cloth, 3*s*. 6*d*.

IV.

LECTURES ON WINTER COUGH (CATARRH, BRONCHITIS, EMPHYSEMA, ASTHMA); with an Appendix on some Principles of Diet in Disease. Post 8vo. cloth, 5*s*. 6*d*.

V.

LECTURES ON THE TRUE FIRST STAGE OF CONSUMPTION. Crown 8vo. cloth, 3*s*. 6*d*.

DR. TOOGOOD DOWNING.

NEURALGIA: its various Forms, Pathology, and Treatment. THE JACKSONIAN PRIZE ESSAY FOR 1850. 8vo. cloth, 10*s*. 6*d*.

DR. DRUITT, F.R.C.S.

THE SURGEON'S VADE-MECUM; with numerous Engravings on Wood. Ninth Edition. Foolscap 8vo. cloth, 12*s*. 6*d*.

MR. DUNN, F.R.C.S.

PSYCHOLOGY—PHYSIOLOGICAL, 4*s*.; MEDICAL, 3*s*.

SIR JAMES EYRE, M.D.

I.

THE STOMACH AND ITS DIFFICULTIES. Fifth Edition. Fcap. 8vo. cloth, 2*s*. 6*d*.

II.

PRACTICAL REMARKS ON SOME EXHAUSTING DISEASES. Second Edition. Post 8vo. cloth, 4*s*. 6*d*.

DR. FAYRER, M.D., F.R.C.S.

CLINICAL SURGERY IN INDIA. With Engravings. 8vo. cloth, 16*s*.

DR. FENWICK.

ON SCROFULA AND CONSUMPTION. Clergyman's Sore Throat, Catarrh, Croup, Bronchitis, Asthma. Fcap. 8vo., 2*s.* 6*d.*

SIR WILLIAM FERGUSSON, BART., F.R.S.

I.

A SYSTEM OF PRACTICAL SURGERY; with numerous Illustrations on Wood. Fourth Edition. Fcap. 8vo. cloth, 12*s.* 6*d.*

II.

LECTURES ON THE PROGRESS OF ANATOMY AND SURGERY DURING THE PRESENT CENTURY. With numerous Engravings. 8vo. cloth, 10*s.* 6*d.*

SIR JOHN FIFE, F.R.C.S. AND MR. URQUHART.

MANUAL OF THE TURKISH BATH. Heat a Mode of Cure and a Source of Strength for Men and Animals. With Engravings. Post 8vo. cloth, 5*s.*

MR. FLOWER, F.R.S., F.R.C.S.

DIAGRAMS OF THE NERVES OF THE HUMAN BODY, exhibiting their Origin, Divisions, and Connexions, with their Distribution to the various Regions of the Cutaneous Surface, and to all the Muscles. Folio, containing Six Plates, 14*s.*

DR. BALTHAZAR FOSTER, M.D., M.R.C.P.

THE USE OF THE SPHYGMOGRAPH IN THE INVESTIGATION OF DISEASE. With Engravings. 8vo. cloth, 2*s.* 6*d.*

MR. FOWNES, PH.D., F.R.S.

I.

A MANUAL OF CHEMISTRY; with 187 Illustrations on Wood. Ninth Edition. Fcap. 8vo. cloth, 12*s.* 6*d.*
Edited by H. Bence Jones, M.D., F.R.S., and A. W. Hofmann, Ph.D., F.R.S.

II.

CHEMISTRY, AS EXEMPLIFYING THE WISDOM AND BENEFICENCE OF GOD. Second Edition. Fcap. 8vo. cloth, 4*s.* 6*d.*

III.

INTRODUCTION TO QUALITATIVE ANALYSIS. Post 8vo. cloth, 2*s.*

DR. D. J. T. FRANCIS.

CHANGE OF CLIMATE; considered as a Remedy in Dyspeptic, Pulmonary, and other Chronic Affections; with an Account of the most Eligible Places of Residence for Invalids, at different Seasons of the Year. Post 8vo. cloth, 8*s.* 6*d.*

DR. W. FRAZER.

ELEMENTS OF MATERIA MEDICA; containing the Chemistry and Natural History of Drugs—their Effects, Doses, and Adulterations. Second Edition. 8vo. cloth, 10*s.* 6*d.*

C. REMIGIUS FRESENIUS.

A SYSTEM OF INSTRUCTION IN CHEMICAL ANALYSIS,
Edited by Lloyd Bullock, F.C.S.
Qualitative. Sixth Edition, with Coloured Plate illustrating Spectrum Analysis. 8vo. cloth, 10*s.* 6*d.*——Quantitative. Fourth Edition. 8vo. cloth, 18*s.*

DR. FULLER.

I.

ON DISEASES OF THE LUNGS AND AIR PASSAGES. Second Edition. 8vo. cloth, 12*s.* 6*d.*

II.

ON DISEASES OF THE HEART AND GREAT VESSELS. 8vo. cloth, 7*s.* 6*d.*

III.

ON RHEUMATISM, RHEUMATIC GOUT, AND SCIATICA: their Pathology, Symptoms, and Treatment. Third Edition. 8vo. cloth, 12*s.* 6*d.*

MR. GALLOWAY.

I.

THE FIRST STEP IN CHEMISTRY. Fourth Edition. Fcap. 8vo. cloth.

II.

THE SECOND STEP IN CHEMISTRY; or, the Student's Guide to the Higher Branches of the Science. With Engravings. 8vo. cloth, 10*s.*

III.

A MANUAL OF QUALITATIVE ANALYSIS. Fourth Edition. Post 8vo. cloth, 6*s.* 6*d.*

IV.

CHEMICAL TABLES. On Five Large Sheets, for School and Lecture Rooms. Second Edition. 4*s.* 6*d.*

MR. J. SAMPSON GAMGEE.

HISTORY OF A SUCCESSFUL CASE OF AMPUTATION AT THE HIP-JOINT (the limb 48-in. in circumference, 99 pounds weight). With 4 Photographs. 4to cloth, 10*s.* 6*d.*

MR. F. J. GANT, F.R.C.S.

I.

THE PRINCIPLES OF SURGERY: Clinical, Medical, and Operative. With Engravings. 8vo. cloth, 18*s.*

II.

THE IRRITABLE BLADDER: its Causes and Curative Treatment. Second Edition, enlarged. Crown 8vo. cloth, 5*s.*

SIR DUNCAN GIBB, BART., M.D.

I.

ON DISEASES OF THE THROAT AND WINDPIPE, as reflected by the Laryngoscope. Second Edition. With 116 Engravings. Post 8vo cloth, 10*s.* 6*d.*

II.

THE LARYNGOSCOPE IN DISEASES OF THE THROAT, with a Chapter on RHINOSCOPY. Second Edition, enlarged, with Engravings. Crown 8vo., cloth, 5*s.*

MRS. GODFREY.

ON THE NATURE, PREVENTION, TREATMENT, AND CURE OF SPINAL CURVATURES and DEFORMITIES of the CHEST and LIMBS, without ARTIFICIAL SUPPORTS or any MECHANICAL APPLIANCES. Third Edition, Revised and Enlarged. 8vo. cloth 5*s.*

DR. GORDON, M.D. C.B.

I.

ARMY HYGIENE. 8vo. cloth, 20*s.*

II.

CHINA, FROM A MEDICAL POINT OF VIEW, IN 1860 AND 1861; With a Chapter on Nagasak as a Sanatarium. 8vo. cloth, 10*s.* 6*d.*

DR. GAIRDNER.

ON GOUT; its History, its Causes, and its Cure. Fourth Edition. Post 8vo. cloth, 8*s.* 6*d.*

DR. GRANVILLE, F.R.S.

I.

THE MINERAL SPRINGS OF VICHY: their Efficacy in the Treatment of Gout, Indigestion, Gravel, &c. 8vo. cloth, 3*s.*

II.

ON SUDDEN DEATH. Post 8vo., 2*s.* 6*d.*

DR. GRAVES M.D., F.R.S.

STUDIES IN PHYSIOLOGY AND MEDICINE. Edited by Dr. Stokes. With Portrait and Memoir. 8vo. cloth, 14*s.*

DR. S. C. GRIFFITH, M.D.

ON DERMATOLOGY AND THE TREATMENT OF SKIN DISEASES BY MEANS OF HERBS, IN PLACE OF ARSENIC AND MERCURY. Fcap. 8vo. cloth, 3*s.*

MR. GRIFFITHS.

CHEMISTRY OF THE FOUR SEASONS—Spring, Summer, Autumn, Winter. Illustrated with Engravings on Wood. Second Edition. Foolscap 8vo. cloth, 7*s.* 6*d.*

DR. GULLY.

THE SIMPLE TREATMENT OF DISEASE; deduced from the Methods of Expectancy and Revulsion. 18mo. cloth, 4*s.*

DR. GUY AND DR. JOHN HARLEY.

HOOPER'S PHYSICIAN'S VADE-MECUM; OR, MANUAL OF THE PRINCIPLES AND PRACTICE OF PHYSIC. Seventh Edition, considerably enlarged, and rewritten. Foolscap 8vo. cloth, 12*s.* 6*d.*

GUY'S HOSPITAL REPORTS. Third Series. Vol. XIII., 8vo. 7*s.* 6*d.*

DR. HABERSHON, F.R.C.P.

I.

ON DISEASES OF THE ABDOMEN, comprising those of the Stomach and other Parts of the Alimentary Canal, Œsophagus, Stomach, Cæcum, Intestines, and Peritoneum. Second Edition, with Plates. 8vo. cloth, 14*s.*

II.

ON THE INJURIOUS EFFECTS OF MERCURY IN THE TREATMENT OF DISEASE. Post 8vo. cloth, 3*s.* 6*d.*

DR. C. RADCLYFFE HALL.

TORQUAY IN ITS MEDICAL ASPECT AS A RESORT FOR PULMONARY INVALIDS. Post 8vo. cloth, 5*s.*

DR. MARSHALL HALL, F.R.S.

I.

PRONE AND POSTURAL RESPIRATION IN DROWNING AND OTHER FORMS OF APNŒA OR SUSPENDED RESPIRATION. Post 8vo. cloth. 5*s.*

II.

PRACTICAL OBSERVATIONS AND SUGGESTIONS IN MEDICINE. Second Series. Post 8vo. cloth, 8*s.* 6*d.*

MR. HARDWICH.

A MANUAL OF PHOTOGRAPHIC CHEMISTRY. With Engravings. Seventh Edition. Foolscap 8vo. cloth, 7*s.* 6*d.*

DR. J. BOWER HARRISON, M.D., M.R.C.P.

I.

LETTERS TO A YOUNG PRACTITIONER ON THE DISEASES OF CHILDREN. Foolscap 8vo. cloth, 3*s.*

II.

ON THE CONTAMINATION OF WATER BY THE POISON OF LEAD, and its Effects on the Human Body. Foolscap 8vo. cloth, 3*s.* 6*d.*

DR. HARTWIG.

I.

ON SEA BATHING AND SEA AIR. Second Edition. Fcap. 8vo., 2*s.* 6*d.*

II.

ON THE PHYSICAL EDUCATION OF CHILDREN. Fcap. 8vo., 2*s.* 6*d.*

DR. A. H. HASSALL.

I.

THE URINE, IN HEALTH AND DISEASE; being an Explanation of the Composition of the Urine, and of the Pathology and Treatment of Urinary and Renal Disorders. Second Edition. With 79 Engravings (23 Coloured). Post 8vo. cloth, 12*s.* 6*d.*

II.

THE MICROSCOPIC ANATOMY OF THE HUMAN BODY, IN HEALTH AND DISEASE. Illustrated with Several Hundred Drawings in Colour. Two vols. 8vo. cloth, £1. 10*s.*

MR. ALFRED HAVILAND, M.R.C.S.

CLIMATE, WEATHER, AND DISEASE; being a Sketch of the Opinions of the most celebrated Ancient and Modern Writers with regard to the Influence of Climate and Weather in producing Disease. With Four coloured Engravings. 8vo. cloth, 7*s.*

DR. HEADLAND, M.D., F.R.C.P.

I.

ON THE ACTION OF MEDICINES IN THE SYSTEM. Fourth Edition. 8vo. cloth, 14*s.*

II.

A MEDICAL HANDBOOK; comprehending such Information on Medical and Sanitary Subjects as is desirable in Educated Persons. Second Thousand. Foolscap 8vo. cloth, 5*s.*

DR. HEALE.

I.

A TREATISE ON THE PHYSIOLOGICAL ANATOMY OF THE LUNGS. With Engravings. 8vo. cloth, 8*s.*

II.

A TREATISE ON VITAL CAUSES. 8vo. cloth, 9*s.*

MR. CHRISTOPHER HEATH, F.R.C.S.

I.

PRACTICAL ANATOMY: a Manual of Dissections. With numerous Engravings. Fcap. 8vo. cloth, 10*s.* 6*d.*

II.

A MANUAL OF MINOR SURGERY AND BANDAGING, FOR THE USE OF HOUSE-SURGEONS, DRESSERS, AND JUNIOR PRACTITIONERS. With Illustrations. Third Edition. Fcap. 8vo. cloth, 5*s.*

MR. HIGGINBOTTOM, F.R.S., F.R.C.S.E.

A PRACTICAL ESSAY ON THE USE OF THE NITRATE OF SILVER IN THE TREATMENT OF INFLAMMATION, WOUNDS, AND ULCERS. Third Edition, 8vo. cloth, 6*s.*

DR. HINDS.

THE HARMONIES OF PHYSICAL SCIENCE IN RELATION TO THE HIGHER SENTIMENTS; with Observations on Medical Studies, and on the Moral and Scientific Relations of Medical Life. Post 8vo. cloth, 4*s.*

MR. J. A. HINGESTON, M.R.C.S.

TOPICS OF THE DAY, MEDICAL, SOCIAL, AND SCIENTIFIC. Crown 8vo. cloth, 7*s.* 6*d.*

DR. HODGES.

THE NATURE, PATHOLOGY, AND TREATMENT OF PUERPERAL CONVULSIONS. Crown 8vo. cloth, 3s.

DR. DECIMUS HODGSON.

THE PROSTATE GLAND, AND ITS ENLARGEMENT IN OLD AGE. With 12 Plates. Royal 8vo. cloth, 6*s.*

MR. JABEZ HOGG.

A MANUAL OF OPHTHALMOSCOPIC SURGERY; being a Practical Treatise on the Use of the Ophthalmoscope in Diseases of the Eye. Third Edition. With Coloured Plates. 8vo. cloth, 10*s.* 6*d.*

MR. LUTHER HOLDEN, F.R.C.S.

I.

HUMAN OSTEOLOGY: with Plates, showing the Attachments of the Muscles. Third Edition. 8vo. cloth, 16*s.*

II.

A MANUAL OF THE DISSECTION OF THE HUMAN BODY. With Engravings on Wood. Second Edition. 8vo. cloth, 16*s.*

MR BARNARD HOLT, F.R.C.S.

ON THE IMMEDIATE TREATMENT OF STRICTURE OF THE URETHRA. Second Edition, Enlarged. 8vo. cloth, 3*s.*

DR. W. CHARLES HOOD.

SUGGESTIONS FOR THE FUTURE PROVISION OF CRIMINAL LUNATICS. 8vo. cloth, *5s. 6d.*

DR. P. HOOD.

THE SUCCESSFUL TREATMENT OF SCARLET FEVER; also, OBSERVATIONS ON THE PATHOLOGY AND TREATMENT OF CROWING INSPIRATIONS OF INFANTS. Post 8vo. cloth, *5s.*

MR. JOHN HORSLEY.

A CATECHISM OF CHEMICAL PHILOSOPHY; being a Familiar Exposition of the Principles of Chemistry and Physics. With Engravings on Wood. Designed for the Use of Schools and Private Teachers. Post 8vo. cloth, *6s. 6d.*

DR. JAMES A. HORTON, M.D.

PHYSICAL AND MEDICAL CLIMATE AND METEOROLOGY OF THE WEST COAST OF AFRICA. 8vo. cloth, *10s.*

MR. LUKE HOWARD, F.R.S.

ESSAY ON THE MODIFICATIONS OF CLOUDS. Third Edition, by W. D. and E. Howard. With 6 Lithographic Plates, from Pictures by Kenyon. 4to. cloth, *10s. 6d.*

DR. HAMILTON HOWE, M.D.

A THEORETICAL INQUIRY INTO THE PHYSICAL CAUSE OF EPIDEMIC DISEASES. Accompanied with Tables. 8vo. cloth, *7s.*

DR. HUFELAND.

THE ART OF PROLONGING LIFE. Second Edition. Edited by Erasmus Wilson, F.R.S. Foolscap 8vo., *2s. 6d.*

MR. W. CURTIS HUGMAN, F.R.C.S.

ON HIP-JOINT DISEASE; with reference especially to Treatment by Mechanical Means for the Relief of Contraction and Deformity of the Affected Limb. With Plates. Re-issue, enlarged. 8vo. cloth, *3s. 6d.*

MR. HULKE, F.R.C.S.

A PRACTICAL TREATISE ON THE USE OF THE OPHTHALMOSCOPE. Being the Jacksonian Prize Essay for 1859. Royal 8vo. cloth, *8s.*

DR. HENRY HUNT.

ON HEARTBURN AND INDIGESTION. 8vo. cloth, *5s.*

MR. G. Y. HUNTER, M.R.C.S.

BODY AND MIND: the Nervous System and its Derangements. Fcap. 8vo. cloth, *3s. 6d.*

PROFESSOR HUXLEY, F.R.S.

LECTURES ON THE ELEMENTS OF COMPARATIVE ANATOMY.—ON CLASSIFICATON AND THE SKULL. With 111 Illustrations. 8vo. cloth, *10s. 6d.*

MR. JONATHAN HUTCHINSON, F.R.C.S.

A CLINICAL MEMOIR ON CERTAIN DISEASES OF THE EYE AND EAR, CONSEQUENT ON INHERITED SYPHILIS; with an appended Chapter of Commentaries on the Transmission of Syphilis from Parent to Offspring, and its more remote Consequences. With Plates and Woodcuts, 8vo. cloth, 9*s*.

DR. INMAN, M.R.C.P.

I.

ON MYALGIA: ITS NATURE, CAUSES, AND TREATMENT; being a Treatise on Painful and other Affections of the Muscular System. Second Edition. 8vo. cloth, 9*s*.

II.

FOUNDATION FOR A NEW THEORY AND PRACTICE OF MEDICINE. Second Edition. Crown 8vo. cloth, 10*s*.

DR. JAGO, M.D.OXON., A.B.CANTAB.

ENTOPTICS, WITH ITS USES IN PHYSIOLOGY AND MEDICINE. With 54 Engravings. Crown 8vo. cloth, 5*s*.

MR. J. H. JAMES, F.R.C.S.

I.

PRACTICAL OBSERVATIONS ON THE OPERATIONS FOR STRANGULATED HERNIA. 8vo. cloth, 5*s*.

II.

ON THE DISTINCTIVE CHARACTERS OF EXTERNAL INFLAMMATIONS, AND ON INFLAMMATORY OR SYMPATHETIC FEVER. 8vo. cloth, 5*s*.

DR. PROSSER JAMES, M.D.

SORE-THROAT: ITS NATURE, VARIETIES, AND TREATMENT; including the Use of the LARYNGOSCOPE as an Aid to Diagnosis. Second Edition, with numerous Engravings. Post 8vo. cloth, 5*s*.

DR. JENCKEN, M.D., M.R.C.P.

THE CHOLERA: ITS ORIGIN, IDIOSYNCRACY, AND TREATMENT. Fcap. 8vo. cloth, 2*s*. 6*d*.

DR. HANDFIELD JONES, M.B., F.R.C.P.

CLINICAL OBSERVATIONS ON FUNCTIONAL NERVOUS DISORDERS. Post 8vo. cloth, 10*s*. 6*d*.

DR. H. BENCE JONES, M.D., F.R.S.

LECTURES ON SOME OF THE APPLICATIONS OF CHEMISTRY AND MECHANICS TO PATHOLOGY AND THERAPEUTICS. 8vo. cloth, 12*s*.

DR. HANDFIELD JONES, F.R.S., & DR. EDWARD H. SIEVEKING.

A MANUAL OF PATHOLOGICAL ANATOMY. Illustrated with numerous Engravings on Wood. Foolscap 8vo. cloth, 12*s*. 6*d*.

DR. JAMES JONES, M.D., M.R.C.P.

ON THE USE OF PERCHLORIDE OF IRON AND OTHER CHALYBEATE SALTS IN THE TREATMENT OF CONSUMPTION. Crown 8vo. cloth, 3*s*. 6*d*.

MR. WHARTON JONES, F.R.S.

I.

A MANUAL OF THE PRINCIPLES AND PRACTICE OF OPHTHALMIC MEDICINE AND SURGERY; with Nine Coloured Plates and 173 Wood Engravings. Third Edition, thoroughly revised. Foolscap 8vo. cloth, 12*s.* 6*d.*

II.

THE WISDOM AND BENEFICENCE OF THE ALMIGHTY, AS DISPLAYED IN THE SENSE OF VISION. Actonian Prize Essay. With Illustrations on Steel and Wood. Foolscap 8vo. cloth, 4*s.* 6*d.*

III.

DEFECTS OF SIGHT AND HEARING: their Nature, Causes, Prevention, and General Management. Second Edition, with Engravings. Fcap. 8vo. 2*s.* 6*d.*

IV.

A CATECHISM OF THE MEDICINE AND SURGERY OF THE EYE AND EAR. For the Clinical Use of Hospital Students. Fcap. 8vo. 2*s.* 6*d.*

V.

A CATECHISM OF THE PHYSIOLOGY AND PHILOSOPHY OF BODY, SENSE, AND MIND. For Use in Schools and Colleges. Fcap. 8vo., 2*s.* 6*d.*

MR. FURNEAUX JORDAN, M.R.C.S.

AN INTRODUCTION TO CLINICAL SURGERY; WITH A Method of Investigating and Reporting Surgical Cases. Fcap. 8vo. cloth, 5*s.*

MR. JUDD.

A PRACTICAL TREATISE ON URETHRITIS AND SYPHILIS: including Observations on the Power of the Menstruous Fluid, and of the Discharge from Leucorrhœa and Sores to produce Urethritis: with a variety of Examples, Experiments, Remedies, and Cures. 8vo. cloth, £1. 5*s.*

DR. LAENNEC.

A MANUAL OF AUSCULTATION AND PERCUSSION. Translated and Edited by J. B. SHARPE, M.R.C.S. 3*s.*

DR. LANE, M.A.

HYDROPATHY; OR, HYGIENIC MEDICINE. An Explanatory Essay. Second Edition. Post 8vo. cloth, 5*s.*

SIR WM. LAWRENCE, BART., F.R.S.

I.

LECTURES ON SURGERY. 8vo. cloth, 16*s.*

II.

A TREATISE ON RUPTURES. The Fifth Edition, considerably enlarged. 8vo. cloth, 16*s.*

DR. LEARED, M.R.C.P.

IMPERFECT DIGESTION: ITS CAUSES AND TREATMENT. Fourth Edition. Foolscap 8vo. cloth, 4*s.*

DR. EDWIN LEE.

I.

THE EFFECT OF CLIMATE ON TUBERCULOUS DISEASE, with Notices of the chief Foreign Places of Winter Resort. Small 8vo. cloth, 4*s.* 6*d.*

II.

THE WATERING PLACES OF ENGLAND, CONSIDERED with Reference to their Medical Topography. Fourth Edition. Fcap. 8vo. cloth, 7*s.* 6*d.*

III.

THE PRINCIPAL BATHS OF FRANCE. Fourth Edition. Fcap. 8vo. cloth, 3*s.* 6*d.*

IV.

THE BATHS OF GERMANY. Fourth Edition. Post 8vo. cloth, 7*s.*

V.

THE BATHS OF SWITZERLAND. 12mo. cloth, 3*s.* 6*d.*

VI.

HOMŒOPATHY AND HYDROPATHY IMPARTIALLY APPRECIATED. Fourth Edition. Post 8vo. cloth, 3*s.*

MR. HENRY LEE, F.R.C.S.

I.

ON SYPHILIS. Second Edition. With Coloured Plates. 8vo. cloth, 10*s.*

II.

ON DISEASES OF THE VEINS, HÆMORRHOIDAL TUMOURS, AND OTHER AFFECTIONS OF THE RECTUM. Second Edition. 8vo. cloth, 8*s.*

DR. ROBERT LEE, F.R.S.

I.

CONSULTATIONS IN MIDWIFERY. Foolscap 8vo. cloth, 4*s.* 6*d.*

II.

A TREATISE ON THE SPECULUM; with Three Hundred Cases. 8vo. cloth, 4*s.* 6*d.*

III.

CLINICAL REPORTS OF OVARIAN AND UTERINE DISEASES, with Commentaries. Foolscap 8vo. cloth, 6*s.* 6*d.*

IV.

CLINICAL MIDWIFERY: comprising the Histories of 545 Cases of Difficult, Preternatural, and Complicated Labour, with Commentaries. Second Edition. Foolscap 8vo. cloth, 5*s.*

DR. LEISHMAN, M.D., F.F.P.S.

THE MECHANISM OF PARTURITION: An Essay, Historical and Critical. With Engravings. 8vo. cloth, 5*s.*

MR. LISTON, F.R.S.

PRACTICAL SURGERY. Fourth Edition. 8vo. cloth, 22*s.*

MR. H. W. LOBB, L.S.A., M.R.C.S.E.

ON SOME OF THE MORE OBSCURE FORMS OF NERVOUS AFFECTIONS, THEIR PATHOLOGY AND TREATMENT. Re-issue, with the Chapter on Galvanism entirely Re-written. With Engravings. 8vo. cloth, 8*s.*

DR. LOGAN, M.D., M.R.C.P.LOND.

ON OBSTINATE DISEASES OF THE SKIN. Fcap. 8vo. cloth, 2*s.* 6*d.*

LONDON HOSPITAL.

CLINICAL LECTURES AND REPORTS BY THE MEDICAL AND SURGICAL STAFF. With Illustrations. Vols. I. to IV. 8vo. cloth, 7*s.* 6*d.*

LONDON MEDICAL SOCIETY OF OBSERVATION.

WHAT TO OBSERVE AT THE BED-SIDE, AND AFTER DEATH. Published by Authority. Second Edition. Foolscap 8vo. cloth, 4*s.* 6*d.*

MR. HENRY LOWNDES, M.R.C.S.

AN ESSAY ON THE MAINTENANCE OF HEALTH. Fcap. 8vo. cloth, 2*s.* 6*d.*

MR. M'CLELLAND, F.L.S., F.G.S.

THE MEDICAL TOPOGRAPHY, OR CLIMATE AND SOILS, OF BENGAL AND THE N. W. PROVINCES. Post 8vo. cloth, 4*s.* 6*d.*

DR. MACLACHLAN, M.D., F.R.C.P.L.

THE DISEASES AND INFIRMITIES OF ADVANCED LIFE. 8vo. cloth, 16*s.*

DR. A. C. MACLEOD, M.R.C.P.LOND.

ACHOLIC DISEASES; comprising Jaundice, Diarrhœa, Dysentery, and Cholera. Post 8vo. cloth, 5*s.* 6*d.*

DR. GEORGE H. B. MACLEOD, F.R.C.S.E.

I.

OUTLINES OF SURGICAL DIAGNOSIS. 8vo. cloth, 12*s.* 6*d.*

II.

NOTES ON THE SURGERY OF THE CRIMEAN WAR; with REMARKS on GUN-SHOT WOUNDS. 8vo. cloth, 10*s.* 6*d.*

MR. JOSEPH MACLISE, F.R.C.S.

I.

SURGICAL ANATOMY. A Series of Dissections, illustrating the Principal Regions of the Human Body.
The Second Edition, imperial folio, cloth, £3. 12*s.*; half-morocco, £4. 4*s.*

II.

ON DISLOCATIONS AND FRACTURES. This Work is Uniform with the Author's "Surgical Anatomy;" each Fasciculus contains Four beautifully executed Lithographic Drawings. Imperial folio, cloth, £2. 10*s.*; half-morocco, £2. 17*s.*

MR. MACNAMARA.

ON DISEASES OF THE EYE; referring principally to those Affections requiring the aid of the Ophthalmoscope for their Diagnosis. With coloured plates. 8vo. cloth, 10*s.* 6*d.*

DR. McNICOLL, M.R.C.P.

A HAND-BOOK FOR SOUTHPORT, MEDICAL & GENERAL; with Copious Notices of the Natural History of the District. Second Edition. Post 8vo. cloth, 3*s.* 6*d.*

DR. MARCET, F.R.S.

I.

ON THE COMPOSITION OF FOOD, AND HOW IT IS ADULTERATED; with Practical Directions for its Analysis. 8vo. cloth, 6*s.* 6*d.*

II.

ON CHRONIC ALCOHOLIC INTOXICATION; with an INQUIRY INTO THE INFLUENCE OF THE ABUSE OF ALCOHOL AS A PREDISPOSING CAUSE OF DISEASE. Second Edition, much enlarged. Foolscap 8vo. cloth, 4*s.* 6*d.*

DR. J. MACPHERSON, M.D.

CHOLERA IN ITS HOME; with a Sketch of the Pathology and Treatment of the Disease. Crown vo. cloth, 5*s*.

DR. MARKHAM.

I.

DISEASES OF THE HEART: THEIR PATHOLOGY, DIAGNOSIS, AND TREATMENT. Second Edition. Post 8vo. cloth, 6*s*.

II.

SKODA ON AUSCULTATION AND PERCUSSION. Post 8vo. cloth, 6*s*.

III.

BLEEDING AND CHANGE IN TYPE OF DISEASES. Gulstonian Lectures for 1864. Crown 8vo. 2*s*. 6*d*.

SIR RANALD MARTIN, K.C.B., F.R.S.

INFLUENCE OF TROPICAL CLIMATES IN PRODUCING THE ACUTE ENDEMIC DISEASES OF EUROPEANS; including Practical Observations on their Chronic Sequelæ under the Influences of the Climate of Europe. Second Edition, much enlarged. 8vo. cloth, 20*s*.

MR. C. F. MAUNDER, F.R.C.S.

OPERATIVE SURGERY. With 158 Engravings. Post 8vo. 6*s*.

DR. MAYNE, M.D., LL.D.

I.

AN EXPOSITORY LEXICON OF THE TERMS, ANCIENT AND MODERN, IN MEDICAL AND GENERAL SCIENCE. 8vo. cloth, £2. 10*s*.

II.

A MEDICAL VOCABULARY; or, an Explanation of all Names, Synonymes, Terms, and Phrases used in Medicine and the relative branches of Medical Science. Second Edition. Fcap. 8vo. cloth, 8*s*. 6*d*.

DR. MERYON, M.D., F.R.C.P.

PATHOLOGICAL AND PRACTICAL RESEARCHES ON THE VARIOUS FORMS OF PARALYSIS. 8vo. cloth, 6*s*.

DR. MILLINGEN.

ON THE TREATMENT AND MANAGEMENT OF THE INSANE; with Considerations on Public and Private Lunatic Asylums. 18mo. cloth, 4*s*. 6*d*.

DR. W. J. MOORE, M.D.

I.

HEALTH IN THE TROPICS; or, Sanitary Art applied to Europeans in India. 8vo. cloth, 9*s*.

II.

A MANUAL OF THE DISEASES OF INDIA. Fcap. 8vo. cloth, 5*s*.

DR. JAMES MORRIS, M.D.LOND.

GERMINAL MATTER AND THE CONTACT THEORY: An Essay on the Morbid Poisons. Second Edition. Crown 8vo. cloth, 4*s*. 6*d*.

PROFESSOR MULDER, UTRECHT.

THE CHEMISTRY OF WINE. Edited by H. Bence Jones, M.D., F.R.S. Fcap. 8vo. cloth, 6*s*.

DR. W. MURRAY, M.D., M.R.C.P.

EMOTIONAL DISORDERS OF THE SYMPATHETIC SYSTEM OF NERVES. Crown 8vo. cloth, 3*s*. 6*d*.

DR. MUSHET, M.B., M.R.C.P.

ON APOPLEXY, AND ALLIED AFFECTIONS OF THE BRAIN. 8vo. cloth, 7*s*.

MR. NAYLER, F.R.C.S.

ON THE DISEASES OF THE SKIN. With Plates. 8vo. cloth, 10*s*. 6*d*.

DR. BIRKBECK NEVINS.

THE PRESCRIBER'S ANALYSIS OF THE BRITISH PHARMACOPEIA of 1867. 32mo. cloth, 3*s*. 6*d*.

DR. THOS. NICHOLSON, M.D.

ON YELLOW FEVER; comprising the History of that Disease as it appeared in the Island of Antigua. Fcap. 8vo. cloth, 2*s*. 6*d*.

DR. NOAD, PH.D., F.R.S.

THE INDUCTION COIL, being a Popular Explanation of the Electrical Principles on which it is constructed. Second Edition. With Engravings. Fcap. 8vo. cloth, 3*s*.

DR. NOBLE.

THE HUMAN MIND IN ITS RELATIONS WITH THE BRAIN AND NERVOUS SYSTEM. Post 8vo. cloth, 4*s*. 6*d*.

MR. NUNNELEY, F.R.C.S.E.

I.

ON THE ORGANS OF VISION: THEIR ANATOMY AND PHYSIOLOGY. With Plates, 8vo. cloth, 15*s*.

II.

A TREATISE ON THE NATURE, CAUSES, AND TREATMENT OF ERYSIPELAS. 8vo. cloth, 10*s*. 6*d*.

DR. OPPERT, M.D.

HOSPITALS, INFIRMARIES, AND DISPENSARIES; their Construction, Interior Arrangement, and Management, with Descriptions of existing Institutions. With 58 Engravings. Royal 8vo. cloth, 10*s*. 6*d*.

MR. LANGSTON PARKER.

THE MODERN TREATMENT OF SYPHILITIC DISEASES, both Primary and Secondary; comprising the Treatment of Constitutional and Confirmed Syphilis, by a safe and successful Method. Fourth Edition, 8vo. cloth, 10*s*.

DR. PARKES, F.R.S., F.R.C.P.

I.

A MANUAL OF PRACTICAL HYGIENE; intended especially for the Medical Officers of the Army. With Plates and Woodcuts. 2nd Edition, 8vo. cloth, 16*s*.

II.

THE URINE: ITS COMPOSITION IN HEALTH AND DISEASE, AND UNDER THE ACTION OF REMEDIES. 8vo. cloth, 12*s*.

DR. PARKIN, M.D., F.R.C.S.

I.

THE ANTIDOTAL TREATMENT AND PREVENTION OF THE EPIDEMIC CHOLERA. Third Edition. 8vo. cloth, 7*s.* 6*d.*

II.

THE CAUSATION AND PREVENTION OF DISEASE; with the Laws regulating the Extrication of Malaria from the Surface, and its Diffusion in the surrounding Air. 8vo. cloth, 5*s.*

MR. JAMES PART, F.R.C.S.

THE MEDICAL AND SURGICAL POCKET CASE BOOK, for the Registration of important Cases in Private Practice, and to assist the Student of Hospital Practice. Second Edition. 2*s.* 6*d.*

DR. PATTERSON, M.D.

EGYPT AND THE NILE AS A WINTER RESORT FOR PULMONARY AND OTHER INVALIDS. Fcap. 8vo. cloth, 3*s.*

DR. PAVY, M.D., F.R.S., F.R.C.P.

I.

DIABETES: RESEARCHES ON ITS NATURE AND TREATMENT. 8vo. cloth, 8*s.* 6*d.*

II.

DIGESTION: ITS DISORDERS AND THEIR TREATMENT. 8vo. cloth, 8*s.* 6*d.*

DR. PEACOCK, M.D., F.R.C.P.

I.

ON MALFORMATIONS OF THE HUMAN HEART. With Original Cases and Illustrations. Second Edition. With 8 Plates. 8vo. cloth, 10*s.*

II.

ON SOME OF THE CAUSES AND EFFECTS OF VALVULAR DISEASE OF THE HEART. With Engravings. 8vo. cloth, 5*s.*

DR. W. H. PEARSE, M.D.EDIN.

NOTES ON HEALTH IN CALCUTTA AND BRITISH EMIGRANT SHIPS, including Ventilation, Diet, and Disease. Fcap. 8vo. 2*s.*

DR. PEET, M.D., F.R.C.P.

THE PRINCIPLES AND PRACTICE OF MEDICINE: Designed chiefly for Students of Indian Medical Colleges. 8vo. cloth, 16*s.*

DR. PEREIRA, F.R.S.

SELECTA E PRÆSCRIPTIS. Fourteenth Edition. 24mo. cloth, 5*s.*

DR. PICKFORD.

HYGIENE; or, Health as Depending upon the Conditions of the Atmosphere, Food and Drinks, Motion and Rest, Sleep and Wakefulness, Secretions, Excretions, and Retentions, Mental Emotions, Clothing, Bathing, &c. Vol. I. 8vo. cloth, 9*s.*

PROFESSOR PIRRIE, F.R.S.E.

THE PRINCIPLES AND PRACTICE OF SURGERY. With numerous Engravings on Wood. Second Edition. 8vo. cloth, 24*s.*

PROFESSOR PIRRIE & DR. KEITH.

ACUPRESSURE: an excellent Method of arresting Surgical Hæmorrhage and of accelerating the healing of Wounds. With Engravings. 8vo. cloth, 5*s.*

DR. PIRRIE, M.D.

ON HAY ASTHMA, AND THE AFFECTION TERMED HAY FEVER. Fcap. 8vo. cloth, 2*s.* 6*d.*

PROFESSORS PLATTNER & MUSPRATT.

THE USE OF THE BLOWPIPE IN THE EXAMINATION OF MINERALS, ORES, AND OTHER METALLIC COMBINATIONS. Illustrated by numerous Engravings on Wood. Third Edition. 8vo. cloth, 10*s.* 6*d.*

MR. HENRY POWER, F.R.C.S., M.B.LOND.

ILLUSTRATIONS OF SOME OF THE PRINCIPAL DISEASES OF THE EYE: With an Account of their Symptoms, Pathology and Treatment. Twelve Coloured Plates. 8vo. cloth, 20*s.*

DR. HENRY F. A. PRATT, M.D., M.R.C.P.

I.

THE GENEALOGY OF CREATION, newly Translated from the Unpointed Hebrew Text of the Book of Genesis, showing the General Scientific Accuracy of the Cosmogony of Moses and the Philosophy of Creation. 8vo. cloth, 14*s.*

II.

ON ECCENTRIC AND CENTRIC FORCE: A New Theory of Projection. With Engravings. 8vo. cloth, 10*s.*

III.

ON ORBITAL MOTION: The Outlines of a System of Physical Astronomy. With Diagrams. 8vo. cloth, 7*s.* 6*d.*

IV.

ASTRONOMICAL INVESTIGATIONS. The Cosmical Relations of the Revolution of the Lunar Apsides. Oceanic Tides. With Engravings. 8vo. cloth, 5*s.*

V.

THE ORACLES OF GOD: An Attempt at a Re-interpretation. Part I. The Revealed Cosmos. 8vo. cloth, 10*s.*

THE PRESCRIBER'S PHARMACOPŒIA; containing all the Medicines in the British Pharmacopœia, arranged in Classes according to their Action, with their Composition and Doses. By a Practising Physician. Fifth Edition. 32mo. cloth, 2*s.* 6*d.*; roan rock (for the pocket), 3*s.* 6*d.*

DR. JOHN ROWLISON PRETTY.

AIDS DURING LABOUR, including the Administration of Chloroform, the Management of Placenta and Post-partum Hæmorrhage. Fcap. 8vo. cloth, 4*s.* 6*d.*

MR. P. C. PRICE, F.R.C.S.

AN ESSAY ON EXCISION OF THE KNEE-JOINT. With Coloured Plates. With Memoir of the Author and Notes by Henry Smith, F.R.C.S. Royal 8vo. cloth, 14*s.*

DR. PRIESTLEY.

LECTURES ON THE DEVELOPMENT OF THE GRAVID UTERUS. 8vo. cloth, 5*s.* 6*d.*

DR. RADCLIFFE, F.R.C.P.L.

LECTURES ON EPILEPTIC, SPASMODIC, NEURALGIC, AND PARALYTIC DISORDERS OF THE NERVOUS SYSTEM, delivered at the Royal College of Physicians in London. Post 8vo. cloth, 7*s.* 6*d.*

MR. RAINEY.

ON THE MODE OF FORMATION OF SHELLS OF ANIMALS, OF BONE, AND OF SEVERAL OTHER STRUCTURES, by a Process of Molecular Coalescence, Demonstrable in certain Artificially-formed Products. Fcap. 8vo. cloth, 4*s.* 6*d.*

DR. F. H. RAMSBOTHAM.

THE PRINCIPLES AND PRACTICE OF OBSTETRIC MEDICINE AND SURGERY. Illustrated with One Hundred and Twenty Plates on Steel and Wood; forming one thick handsome volume. Fifth Edition. 8vo. cloth, 22*s.*

DR. RAMSBOTHAM.

PRACTICAL OBSERVATIONS ON MIDWIFERY, with a Selection of Cases. Second Edition. 8vo. cloth, 12*s.*

DR. READE, M.B.T.C.D., L.R.C.S.I.

SYPHILITIC AFFECTIONS OF THE NERVOUS SYSTEM, AND A CASE OF SYMMETRICAL MUSCULAR ATROPHY; with other Contributions to the Pathology of the Spinal Marrow.

PROFESSOR REDWOOD, PH.D.

A SUPPLEMENT TO THE PHARMACOPŒIA: A concise but comprehensive Dispensatory, and Manual of Facts and Formulæ, for the use of Practitioners in Medicine and Pharmacy. Third Edition. 8vo. cloth, 22*s.*

DR. DU BOIS REYMOND.

ANIMAL ELECTRICITY; Edited by H. Bence Jones, M.D., F.R.S. With Fifty Engravings on Wood. Foolscap 8vo. cloth, 6*s.*

DR. REYNOLDS, M.D.LOND.

I.

EPILEPSY: ITS SYMPTOMS, TREATMENT, AND RELATION TO OTHER CHRONIC CONVULSIVE DISEASES. 8vo. cloth, 10*s.*

II.

THE DIAGNOSIS OF DISEASES OF THE BRAIN, SPINAL CORD, AND THEIR APPENDAGES. 8vo. cloth, 8*s.*

DR. B. W. RICHARDSON.

ON THE CAUSE OF THE COAGULATION OF THE BLOOD. Being the Astley Cooper Prize Essay for 1856. With a Practical Appendix. 8vo. cloth, 16*s.*

DR. RITCHIE, M.D.

ON OVARIAN PHYSIOLOGY AND PATHOLOGY. With Engravings. 8vo. cloth, 6*s*.

DR. WILLIAM ROBERTS, M.D., F.R.C.P.

AN ESSAY ON WASTING PALSY; being a Systematic Treatise on the Disease hitherto described as ATROPHIE MUSCULAIRE PROGRESSIVE. With Four Plates. 8vo. cloth, 5*s*.

DR. ROUTH.

INFANT FEEDING, AND ITS INFLUENCE ON LIFE; Or, the Causes and Prevention of Infant Mortality. Second Edition. Fcap. 8vo. cloth, 6*s*.

DR. W. H. ROBERTSON.

I.

THE NATURE AND TREATMENT OF GOUT. 8vo. cloth, 10*s*. 6*d*.

II.

A TREATISE ON DIET AND REGIMEN. Fourth Edition. 2 vols. 12*s*. post 8vo. cloth.

DR. ROWE.

NERVOUS DISEASES, LIVER AND STOMACH COMPLAINTS, LOW SPIRITS, INDIGESTION, GOUT, ASTHMA, AND DISORDERS PRODUCED BY TROPICAL CLIMATES. With Cases. Sixteenth Edition. Fcap. 8vo. 2*s*. 6*d*.

DR. ROYLE, F.R.S., AND DR. HEADLAND, M.D.

A MANUAL OF MATERIA MEDICA AND THERAPEUTICS. With numerous Engravings on Wood. Fourth Edition. Fcap. 8vo. cloth, 12*s*. 6*d*.

DR. RYAN, M.D.

INFANTICIDE: ITS LAW, PREVALENCE, PREVENTION, AND HISTORY. 8vo. cloth, 5*s*.

ST. BARTHOLOMEW'S HOSPITAL.

A DESCRIPTIVE CATALOGUE OF THE ANATOMICAL MUSEUM. Vol. I. (1846), Vol. II. (1851), Vol. III. (1862), 8vo. cloth, 5*s*. each.

ST. GEORGE'S HOSPITAL REPORTS. Vols. I. & II. 8vo. 7*s*. 6*d*.

MR. T. P. SALT, BIRMINGHAM.

I.

ON DEFORMITIES AND DEBILITIES OF THE LOWER EXTREMITIES, AND THE MECHANICAL TREATMENT EMPLOYED IN THE PROMOTION OF THEIR CURE. With numerous Plates. 8vo. cloth, 15*s*.

II.

ON RUPTURE: ITS CAUSES, MANAGEMENT, AND CURE, and the various Mechanical Contrivances employed for its Relief. With Engravings. Post 8vo. cloth, 3*s*.

DR. SALTER, F.R.S.

ON ASTHMA: its Pathology, Causes, Consequences, and Treatment. 8vo. cloth, 10*s*.

DR. SANKEY, M.D.LOND.

LECTURES ON MENTAL DISEASES. 8vo. cloth, 8*s*.

DR. SANSOM M.D.LOND.

I.

CHLOROFORM: ITS ACTION AND ADMINISTRATION. A Handbook. With Engravings. Crown 8vo. cloth, 5*s*.

II.

THE ARREST AND PREVENTION OF CHOLERA; being a Guide to the Antiseptic Treatment. Fcap. 8vo. cloth, 2*s*. 6*d*.

MR. SAVORY.

A COMPENDIUM OF DOMESTIC MEDICINE, AND COMPANION TO THE MEDICINE CHEST; intended as a Source of Easy Reference for Clergymen, and for Families residing at a Distance from Professional Assistance. Seventh Edition. 12mo. cloth, 5*s*.

DR. SCHACHT.

THE MICROSCOPE, AND ITS APPLICATION TO VEGETABLE ANATOMY AND PHYSIOLOGY. Edited by FREDERICK CURREY, M.A. Fcap. 8vo. cloth, 6*s*.

DR. SCORESBY-JACKSON, M.D., F.R.S.E.

MEDICAL CLIMATOLOGY; or, a Topographical and Meteorological Description of the Localities resorted to in Winter and Summer by Invalids of various classes both at Home and Abroad. With an Isothermal Chart. Post 8vo. cloth, 12*s*.

DR. SEMPLE.

ON COUGH: its Causes, Varieties, and Treatment. With some practical Remarks on the Use of the Stethoscope as an aid to Diagnosis. Post 8vo. cloth, 4*s*. 6*d*.

DR. SEYMOUR.

I.

ILLUSTRATIONS OF SOME OF THE PRINCIPAL DISEASES OF THE OVARIA: their Symptoms and Treatment; to which are prefixed Observations on the Structure and Functions of those parts in the Human Being and in Animals. On India paper. Folio, 16*s*.

II.

THE NATURE AND TREATMENT OF DROPSY; considered especially in reference to the Diseases of the Internal Organs of the Body, which most commonly produce it. 8vo. 5*s*.

DR. SHAPTER, M.D., F.R.C.P.

THE CLIMATE OF THE SOUTH OF DEVON, AND ITS INFLUENCE UPON HEALTH. Second Edition, with Maps. 8vo. cloth, 10*s*. 6*d*.

MR. SHAW, M.R.C.S.

THE MEDICAL REMEMBRANCER; OR, BOOK OF EMERGENCIES. Fifth Edition. Edited, with Additions, by JONATHAN HUTCHINSON, F.R.C.S. 32mo. cloth, 2*s*. 6*d*.

DR. SHEA, M.D., B.A.

A MANUAL OF ANIMAL PHYSIOLOGY. With an Appendix of Questions for the B.A. London and other Examinations. With Engravings. Foolscap 8vo. cloth, 5*s*. 6*d*.

DR. SHRIMPTON.

CHOLERA: ITS SEAT, NATURE, AND TREATMENT. With Engravings. 8vo. cloth, 4*s*. 6*d*.

MR. U. J. KAY-SHUTTLEWORTH.

FIRST PRINCIPLES OF MODERN CHEMISTRY: a Manual of Inorganic Chemistry. Crown 8vo. cloth, 4*s*. 6*d*.

DR. SIBSON, F.R.S.

MEDICAL ANATOMY. With coloured Plates. Imperial folio. Fasciculi I. to VI. *5s.* each.

DR. E. H. SIEVEKING.

ON EPILEPSY AND EPILEPTIFORM SEIZURES: their Causes, Pathology, and Treatment. Second Edition. Post 8vo. cloth, 10*s.* 6*d.*

DR. SIMMS.

A WINTER IN PARIS: being a few Experiences and Observations of French Medical and Sanitary Matters. Fcap. 8vo. cloth, 4*s.*

MR. SINCLAIR AND DR JOHNSTON.

PRACTICAL MIDWIFERY: Comprising an Account of 13,748 Deliveries, which occurred in the Dublin Lying-in Hospital, during a period of Seven Years. 8vo. cloth, 10*s.*

DR. SIORDET, M.B.LOND., M.R.C.P.

MENTONE IN ITS MEDICAL ASPECT. Foolscap 8vo. cloth, 2*s.* 6*d.*

MR. ALFRED SMEE, F.R.S.

GENERAL DEBILITY AND DEFECTIVE NUTRITION; their Causes, Consequences, and Treatment. Second Edition. Fcap. 8vo. cloth, 3*s.* 6*d.*

DR. SMELLIE.

OBSTETRIC PLATES: being a Selection from the more Important and Practical Illustrations contained in the Original Work. With Anatomical and Practical Directions. 8vo. cloth, 5*s.*

MR. HENRY SMITH, F.R.C.S.

I.

ON STRICTURE OF THE URETHRA. 8vo. cloth, 7*s.* 6*d.*

II.

HÆMORRHOIDS AND PROLAPSUS OF THE RECTUM: Their Pathology and Treatment, with especial reference to the use of Nitric Acid. Third Edition. Fcap. 8vo. cloth, 3*s.*

III.

THE SURGERY OF THE RECTUM. Lettsomian Lectures. Second Edition. Fcap. 8vo. 3*s.* 6*d.*

DR. J. SMITH, M.D., F.R.C.S.EDIN.

HANDBOOK OF DENTAL ANATOMY AND SURGERY, FOR THE USE OF STUDENTS AND PRACTITIONERS. Fcap. 3vo. cloth, 3*s.* 6*d.*

DR. W. TYLER SMITH.

A MANUAL OF OBSTETRICS, THEORETICAL AND PRACTICAL. Illustrated with 186 Engravings. Fcap. 8vo. cloth, 12*s.* 6*d.*

DR. SNOW.

ON CHLOROFORM AND OTHER ANÆSTHETICS: THEIR ACTION AND ADMINISTRATION. Edited, with a Memoir of the Author, by Benjamin W. Richardson, M.D. 8vo. cloth, 10*s.* 6*d.*

MR. J. VOSE SOLOMON, F.R.C.S.

TENSION OF THE EYEBALL; GLAUCOMA: some Account of the Operations practised in the 19th Century. 8vo. cloth, 4*s.*

DR. STANHOPE TEMPLEMAN SPEER.

PATHOLOGICAL CHEMISTRY, IN ITS APPLICATION TO THE PRACTICE OF MEDICINE. Translated from the French of MM. BECQUEREL and RODIER. 8vo. cloth, reduced to 8*s*.

MR. BALMANNO SQUIRE, M.B.LOND.

I.

COLOURED PHOTOGRAPHS OF SKIN DISEASES. With Descriptive Letterpress. Series I. (12 Parts), 42*s*.; Series II. (6 Parts), 22*s*. 6*d*.; Series III. (6 Parts), 21*s*.

II.

A STUDENT'S ATLAS OF SKIN DISEASES. (A Series of Chromolithographs, with Descriptive Letterpress). With cloth portfolio, 25*s*.

MR. PETER SQUIRE.

I.

A COMPANION TO THE BRITISH PHARMACOPÆIA. Fifth Edition. 8vo. cloth, 8*s*. 6*d*.

II.

THE PHARMACOPÆIAS OF THIRTEEN OF THE LONDON HOSPITALS, arranged in Groups for easy Reference and Comparison. 18mo. cloth, 3*s*. 6*d*.

DR. STEGGALL.

STUDENTS' BOOKS FOR EXAMINATION.

I.

A MEDICAL MANUAL FOR APOTHECARIES' HALL AND OTHER MEDICAL BOARDS. Twelfth Edition. 12mo. cloth, 10*s*.

II.

A MANUAL FOR THE COLLEGE OF SURGEONS; intended for the Use of Candidates for Examination and Practitioners. Second Edition. 12mo. cloth, 10*s*.

III.

GREGORY'S CONSPECTUS MEDICINÆ THEORETICÆ. The First Part, containing the Original Text, with an Ordo Verborum, and Literal Translation. 12mo. cloth, 10*s*.

IV.

THE FIRST FOUR BOOKS OF CELSUS; containing the Text, Ordo Verborum, and Translation. Second Edition. 12mo. cloth, 8*s*.

V.

FIRST LINES FOR CHEMISTS AND DRUGGISTS PREPARING FOR EXAMINATION AT THE PHARMACEUTICAL SOCIETY. Second Edition. 18mo. cloth, 3*s*. 6*d*.

MR. STOWE, M.R.C.S.

A TOXICOLOGICAL CHART, exhibiting at one view the Symptoms, Treatment, and Mode of Detecting the various Poisons, Mineral, Vegetable, and Animal. To which are added, concise Directions for the Treatment of Suspended Animation. Twelfth Edition, revised. On Sheet, 2*s*.; mounted on Roller, 5*s*.

MR. FRANCIS SUTTON, F.C.S.

A SYSTEMATIC HANDBOOK OF VOLUMETRIC ANALYSIS; or, the Quantitative Estimation of Chemical Substances by Measure. With Engravings. Post 8vo. cloth, 7*s*. 6*d*.

DR. SWAYNE.

OBSTETRIC APHORISMS FOR THE USE OF STUDENTS COMMENCING MIDWIFERY PRACTICE. With Engravings on Wood. Fourth Edition. Fcap. 8vo. cloth, 3*s*. 6*d*.

MR. TAMPLIN, F.R.C.S.E.

LATERAL CURVATURE OF THE SPINE: its Causes, Nature, and Treatment. 8vo. cloth, 4*s*.

SIR ALEXANDER TAYLOR, M.D., F.R.S.E.

THE CLIMATE OF PAU; with a Description of the Watering Places of the Pyrenees, and of the Virtues of their respective Mineral Sources in Disease. Third Edition. Post 8vo. cloth, 7*s*.

DR. ALFRED S. TAYLOR, F.R.S.

I.

THE PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE. With 176 Wood Engravings. 8vo. cloth, 28*s*.

II.

A MANUAL OF MEDICAL JURISPRUDENCE. Eighth Edition. With Engravings. Fcap. 8vo. cloth, 12*s*. 6*d*.

III.

ON POISONS, in relation to MEDICAL JURISPRUDENCE AND MEDICINE. Second Edition. Fcap. 8vo. cloth, 12*s*. 6*d*.

MR. TEALE.

ON AMPUTATION BY A LONG AND A SHORT RECTANGULAR FLAP. With Engravings on Wood. 8vo. cloth, 5*s*.

DR. THEOPHILUS THOMPSON, F.R.S.

CLINICAL LECTURES ON PULMONARY CONSUMPTION; with additional Chapters by E. Symes Thompson, M.D. With Plates. 8vo. cloth, 7*s*. 6*d*.

DR. THOMAS.

THE MODERN PRACTICE OF PHYSIC; exhibiting the Symptoms, Causes, Morbid Appearances, and Treatment of the Diseases of all Climates. Eleventh Edition. Revised by Algernon Frampton, M.D. 2 vols. 8vo. cloth, 28*s*.

SIR HENRY THOMPSON, F.R.C.S.

I.

STRICTURE OF THE URETHRA; its Pathology and Treatment. The Jacksonian Prize Essay for 1852. With Plates. Second Edition. 8vo. cloth, 10*s*.

II.

THE DISEASES OF THE PROSTATE; their Pathology and Treatment. Comprising a Dissertation "On the Healthy and Morbid Anatomy of the Prostate Gland;" being the Jacksonian Prize Essay for 1860. With Plates. Second Edition. 8vo. cloth, 10*s*.

III.

PRACTICAL LITHOTOMY AND LITHOTRITY; or, An Inquiry into the best Modes of removing Stone from the Bladder. With numerous Engravings, 8vo. cloth, 9*s*.

DR. THUDICHUM.

I.

A TREATISE ON THE PATHOLOGY OF THE URINE, Including a complete Guide to its Analysis. With Plates, 8vo. cloth, 14*s*.

II.

A TREATISE ON GALL STONES: their Chemistry, Pathology, and Treatment. With Coloured Plates. 8vo. cloth, 10*s*.

DR. TILT.

I.

ON UTERINE AND OVARIAN INFLAMMATION, AND ON THE PHYSIOLOGY AND DISEASES OF MENSTRUATION. Third Edition. 8vo. cloth, 12*s*.

II.

A HANDBOOK OF UTERINE THERAPEUTICS, AND OF MODERN PATHOLOGY OF DISEASES OF WOMEN. Second Edition. Post 8vo. cloth, 6*s*.

III.

THE CHANGE OF LIFE IN HEALTH AND DISEASE: a Practical Treatise on the Nervous and other Affections incidental to Women at the Decline of Life. Second Edition. 8vo. cloth, 6*s*.

DR. GODWIN TIMMS.

CONSUMPTION: its True Nature and Successful Treatment. Re-issue, enlarged. Crown 8vo. cloth, 10*s*.

DR. ROBERT B. TODD, F.R.S.

I.

CLINICAL LECTURES ON THE PRACTICE OF MEDICINE. *New Edition, in one Volume, Edited by* Dr. Beale, *8vo. cloth*, 18*s*.

II.

ON CERTAIN DISEASES OF THE URINARY ORGANS, AND ON DROPSIES. Fcap. 8vo. cloth, 6*s*.

MR. TOMES, F.R.S.

A MANUAL OF DENTAL SURGERY. With 208 Engravings on Wood. Fcap. 8vo. cloth, 12*s*. 6*d*.

DR. TUNSTALL, M.D., M.R.C.P.

THE BATH WATERS: their Uses and Effects in the Cure and Relief of various Chronic Diseases. Fourth Edition, revised. Crown 8vo. cloth, 2*s*.

DR. TURNBULL.

I.

AN INQUIRY INTO THE CURABILITY OF CONSUMPTION, ITS PREVENTION, AND THE PROGRESS OF IMPROVEMENT IN THE TREATMENT. Third Edition. 8vo. cloth, 6*s*.

II.

A PRACTICAL TREATISE ON DISORDERS OF THE STOMACH with FERMENTATION; and on the Causes and Treatment of Indigestion, &c. 8vo. cloth, 6*s*.

DR. TWEEDIE, F.R.S.

CONTINUED FEVERS: THEIR DISTINCTIVE CHARACTERS, PATHOLOGY, AND TREATMENT. With Coloured Plates. 8vo. cloth, 12*s*.

VESTIGES OF THE NATURAL HISTORY OF CREATION. Eleventh Edition. Illustrated with 106 Engravings on Wood. 8vo. cloth, 7*s*. 6*d*.

DR. UNDERWOOD.

TREATISE ON THE DISEASES OF CHILDREN. Tenth Edition, with Additions and Corrections by HENRY DAVIES, M.D. 8vo. cloth, 15*s.*

DR. UNGER.

BOTANICAL LETTERS. Translated by Dr. B. PAUL. Numerous Woodcuts. Post 8vo., 2*s.* 6*d.*

MR. WADE, F.R.C.S.

STRICTURE OF THE URETHRA, ITS COMPLICATIONS AND EFFECTS; a Practical Treatise on the Nature and Treatment of those Affections. Fourth Edition. 8vo. cloth, 7*s.* 6*d.*

DR. WALKER, M.B.LOND.

ON DIPHTHERIA AND DIPHTHERITIC DISEASES. Fcap. 8vo. cloth, 3*s.*

DR. WALLER.

ELEMENTS OF PRACTICAL MIDWIFERY; or, Companion to the Lying-in Room. Fourth Edition, with Plates. Fcap. cloth, 4*s.* 6*d.*

MR. HAYNES WALTON, F.R.C.S.

SURGICAL DISEASES OF THE EYE. With Engravings on Wood. Second Edition. 8vo. cloth, 14*s.*

DR. WARING, M.D., M.R.C.P.LOND.

I.

A MANUAL OF PRACTICAL THERAPEUTICS. Second Edition, Revised and Enlarged. Fcap. 8vo. cloth, 12*s.* 6*d.*

II.

THE TROPICAL RESIDENT AT HOME. Letters addressed to Europeans returning from India and the Colonies on Subjects connected with their Health and General Welfare. Crown 8vo. cloth, 5*s.*

DR. WATERS, M.R.C.P.

I.

THE ANATOMY OF THE HUMAN LUNG. The Prize Essay to which the Fothergillian Gold Medal was awarded by the Medical Society of London. Post 8vo. cloth, 6*s.* 6*d.*

II.

RESEARCHES ON THE NATURE, PATHOLOGY, AND TREATMENT OF EMPHYSEMA OF THE LUNGS, AND ITS RELATIONS WITH OTHER DISEASES OF THE CHEST. With Engravings. 8vo. cloth, 5*s.*

DR. ALLAN WEBB, F.R.C.S.L.

THE SURGEON'S READY RULES FOR OPERATIONS IN SURGERY. Royal 8vo. cloth, 10*s.* 6*d.*

DR. WEBER.

A CLINICAL HAND-BOOK OF AUSCULTATION AND PERCUSSION. Translated by JOHN COCKLE, M.D. *5s.*

MR. SOELBERG WELLS, M.D., M.R.C.S.

ON LONG, SHORT, AND WEAK SIGHT, and their Treatment by the Scientific Use of Spectacles. Second Edition. With Plates. 8vo. cloth, *6s.*

MR. T. SPENCER WELLS, F.R.C.S.

I.

DISEASES OF THE OVARIES: THEIR DIAGNOSIS AND TREATMENT. Vol. I. 8vo. cloth, *9s.*

II.

SCALE OF MEDICINES WITH WHICH MERCHANT VESSELS ARE TO BE FURNISHED, by command of the Privy Council for Trade; With Observations on the Means of Preserving the Health of Seamen, &c. &c. Seventh Thousand. Fcap. 8vo. cloth, *3s. 6d.*

DR. WEST.

LECTURES ON THE DISEASES OF WOMEN. Third Edition. 8vo. cloth, *16s.*

DR. UVEDALE WEST.

ILLUSTRATIONS OF PUERPERAL DISEASES. Second Edition, enlarged. Post 8vo. cloth, *5s.*

MR. WHEELER.

HAND-BOOK OF ANATOMY FOR STUDENTS OF THE FINE ARTS. With Engravings on Wood. Fcap. 8vo., *2s. 6d.*

DR. WHITEHEAD, F.R.C.S.

ON THE TRANSMISSION FROM PARENT TO OFFSPRING OF SOME FORMS OF DISEASE, AND OF MORBID TAINTS AND TENDENCIES. Second Edition. 8vo. cloth, *10s. 6d.*

DR. WILLIAMS, F.R.S.

PRINCIPLES OF MEDICINE: An Elementary View of the Causes, Nature, Treatment, Diagnosis, and Prognosis, of Disease. With brief Remarks on Hygienics, or the Preservation of Health. The Third Edition. 8vo. cloth, *15s.*

DR. CHARLES T. WILLIAMS, M.B.OXON.

THE CLIMATE OF THE SOUTH OF FRANCE, AND ITS VARIETIES, MOST SUITABLE FOR INVALIDS; with Remarks on Italian and other Winter Stations. Crown 8vo. cloth, *3s. 6d.*

THE WIFE'S DOMAIN: the YOUNG COUPLE—the MOTHER—the NURSE—the NURSLING. Post 8vo. cloth, *3s. 6d.*

DR. J. HUME WILLIAMS.

UNSOUNDNESS OF MIND, IN ITS MEDICAL AND LEGAL CONSIDERATIONS. 8vo. cloth, *7s. 6d.*

MR. ERASMUS WILSON, F.R.S.

I.

THE ANATOMIST'S VADE-MECUM: A SYSTEM OF HUMAN ANATOMY. With numerous Illustrations on Wood. Eighth Edition. Foolscap 8vo. cloth, 12*s.* 6*d.*

II.

ON DISEASES OF THE SKIN: A SYSTEM OF CUTANEOUS MEDICINE. Sixth Edition. 8vo. cloth, 18*s.*

THE SAME WORK; illustrated with finely executed Engravings on Steel, accurately coloured. 8vo. cloth, 36*s.*

III.

HEALTHY SKIN: A Treatise on the Management of the Skin and Hair in relation to Health. Seventh Edition. Foolscap 8vo. 2*s.* 6*d.*

IV.

PORTRAITS OF DISEASES OF THE SKIN. Folio. Fasciculi I. to XII., completing the Work. 20*s.* each. The Entire Work, half morocco, £13.

V.

THE STUDENT'S BOOK OF CUTANEOUS MEDICINE AND DISEASES OF THE SKIN. Post 8vo. cloth, 8*s.* 6*d.*

VI.

ON SYPHILIS, CONSTITUTIONAL AND HEREDITARY; AND ON SYPHILITIC ERUPTIONS. With Four Coloured Plates. 8vo. cloth, 16*s.*

VII.

A THREE WEEKS' SCAMPER THROUGH THE SPAS OF GERMANY AND BELGIUM, with an Appendix on the Nature and Uses of Mineral Waters. Post 8vo. cloth, 6*s.* 6*d.*

VIII.

THE EASTERN OR TURKISH BATH: its History, Revival in Britain, and Application to the Purposes of Health. Foolscap 8vo., 2*s.*

DR. G. C. WITTSTEIN.

PRACTICAL PHARMACEUTICAL CHEMISTRY: An Explanation of Chemical and Pharmaceutical Processes, with the Methods of Testing the Purity of the Preparations, deduced from Original Experiments. Translated from the Second German Edition, by STEPHEN DARBY. 18mo. cloth, 6*s.*

DR. HENRY G. WRIGHT.

I.

UTERINE DISORDERS: their Constitutional Influence and Treatment. 8vo. cloth, 7*s.* 6*d.*

II.

HEADACHES; their Causes and their Cure. Fourth Edition. Fcap. 8vo. 2*s.* 6*d.*

DR. YEARSLEY, M.D., M.R.C.S.

I.

DEAFNESS PRACTICALLY ILLUSTRATED; being an Exposition as to the Causes and Treatment of Diseases of the Ear. Sixth Edition. 8vo. cloth, 6*s.*

II.

ON THROAT AILMENTS, MORE ESPECIALLY IN THE ENLARGED TONSIL AND ELONGATED UVULA. Eighth Edition. 8vo. cloth, 5*s.*

CHURCHILL'S SERIES OF MANUALS.

Fcap. 8vo. cloth, 12*s.* 6*d.* each.

"We here give Mr. Churchill public thanks for the positive benefit conferred on the Medical Profession, by the series of beautiful and cheap Manuals which bear his imprint."—*British and Foreign Medical Review.*

AGGREGATE SALE, 150,000 COPIES.

ANATOMY. With numerous Engravings. Eighth Edition. By Erasmus Wilson, F.R.C.S., F.R.S.

BOTANY. With numerous Engravings. By Robert Bentley, F.L.S., Professor of Botany, King's College. and to the Pharmaceutical Society.

CHEMISTRY. With numerous Engravings. Ninth Edition. By George Fownes, F.R.S., H. Bence Jones, M.D., F.R.S., and A. W. Hofmann, F.R.S.

DENTAL SURGERY. With numerous Engravings. By John Tomes, F.R.S.

MATERIA MEDICA. With numerous Engravings. Fourth Edition. By J. Forbes Royle, M.D., F.R.S., and Frederick W. Headland, M.D., F.L.S.

MEDICAL JURISPRUDENCE. With numerous Engravings. Eighth Edition. By Alfred Swaine Taylor, M.D., F.R.S.

PRACTICE OF MEDICINE. Second Edition. By G. Hilaro Barlow, M.D., M.A.

The **MICROSCOPE** and its **REVELATIONS.** With numerous Plates and Engravings. Third Edition. By W. B. Carpenter, M.D., F.R.S.

NATURAL PHILOSOPHY. With numerous Engravings. Sixth Edition. By Charles Brooke, M.B., M.A., F.R.S. *Based on the Work of the late Dr. Golding Bird.*

OBSTETRICS. With numerous Engravings. By W. Tyler Smith, M.D., F.R.C.P.

OPHTHALMIC MEDICINE and **SURGERY.** With coloured Plates and Engravings on Wood. Third Edition. By T. Wharton Jones, F.R.C.S., F.R.S.

PATHOLOGICAL ANATOMY. With numerous Engravings. By C. Handfield Jones, M.B., F.R.S., and E. H. Sieveking, M.D., F.R.C.P.

PHYSIOLOGY. With numerous Engravings. Fourth Edition. By William B. Carpenter, M.D., F.R.S.

POISONS. Second Edition. By Alfred Swaine Taylor, M.D., F.R.S.

PRACTICAL ANATOMY. With numerous Engravings. (10*s.* 6*d.*) By Christopher Heath, F.R.C.S.

PRACTICAL SURGERY. With numerous Engravings. Fourth Edition. By Sir William Fergusson, Bart., F.R.C.S., F.R.S.

THERAPEUTICS. Second Edition. By E. J. Waring, M.D., M.R.C.P.

Printed by W. Blanchard & Sons, 62, Millbank Street, Westminster.