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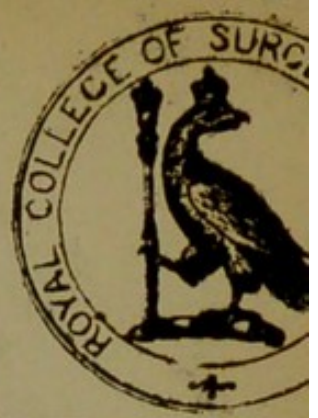
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70
From the Author.



AN

INTRODUCTORY LECTURE:

DELIVERED AT THE

NORTH LONDON

OPHTHALMIC INSTITUTION,

MAY 8TH, 1843.

BY

WILLIAM WHITE COOPER, M.R.C.S.

FELLOW OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY, SURGEON TO
THE NORTH LONDON OPHTHALMIC INSTITUTION AND TO THE
HONORABLE ARTILLERY COMPANY, ETC.

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TO
SIR GEORGE THOMAS STAUNTON, BART.,
M.P., F.R.S., ETC. ETC. ETC.

THIS LECTURE
IS
RESPECTFULLY INSCRIBED,
IN ADMIRATION OF
HIS EXTENSIVE ACQUIREMENTS, HIS ACTIVE BENEVOLENCE,
AND WARMTH OF FRIENDSHIP,
BY
THE AUTHOR.

THE RESULTS REPORT

OF THE

RESEARCH

CONDUCTED BY

THE

RESEARCH

INSTITUTE

OF

INTRODUCTORY LECTURE.

THE investigation of the structure of the human body must suggest to every reflective mind the existence of a superior Creative Power; but there is no part of it which leads more irresistibly to that conviction than the EYE—whether the perfection of its design be regarded, or the delicacy and complexity of its organization.

The more closely it is studied, the more our wonder and admiration are excited; for we find every possible difficulty met—every emergency provided for—and that in so perfect and complete a manner that we are forced to admit the hand of a superior Intelligence, in comparison with which the utmost exertion of human ingenuity sinks into insignificance. No piece of human mechanism can be placed in competition with the Eye. The harmony of its parts—the skill and efficiency of its contrivances, command our highest admiration. Some of these which we can trace and understand we attempt to imitate—in other instances, although we can comprehend the nature and intention of the contrivance we are totally destitute of all means of imitation, for notwithstanding that we see certain effects produced, the *means* by which it is done are alike beyond our knowledge and control: neither anatomy nor chemistry will ever explain how the rays of light act on consciousness so as to produce vision, for natural science has fixed limits which cannot be passed.

As an example of Design, I may instance that evinced in the protection of the eyes by their position in bony cavities, and resting behind upon soft cushions of fat.

As an illustration of contrivance, what can be more beautiful than the means by which the refraction of the rays of light is provided for by the form and structure of the crystalline lens,* or the compensation for spherical and chromatic aberration by the interposition of the iris, at once to regulate the quantity of light admitted, and to shut out those rays which, by their obliquity of incidence, would tend to obscure the brilliancy of the image formed upon the retina by casting a halo around it?

I will only advert to another striking contrivance: the introduction of the vitreous humour, which at once affords a surface for the expansion of the retina, and permits the rays of light to pass uninterrupted and unbroken, that they may meet at focal points exactly upon that membrane.

I might dilate upon many other points which would excite our admiration; but as the subject will be more particularly brought before you during the course, I will not now dwell longer upon it.

Of the importance of the sense of vision it is almost superfluous to remark, were it not that we who are blessed with it can scarcely appreciate its inestimable value. Those only who are deprived of it can fully do so! I may perhaps be permitted to quote the following lines from our immortal poet Milton, as forcibly portraying the anguish of an active and energetic mind, which feels acutely the extent of the misery entailed by the deprivation of sight.

Oh! loss of sight, of thee I most complain!

Light! the prime work of God, to me is extinct
And all her various objects of delight
Annulled, which might in part my grief have eased.

* The crystalline lens in the human subject is composed of a succession of lamellæ about 2000 in number, which gradually increase in density from the circumference to the centre of the lens. These lamellæ consist of fibres, the thickness of which has been estimated at 1-6000th part of an inch, and which are connected laterally by means of a dentated edge or rack-work.

Oh! first created beam, and thou great Word
 "Let there be light"—and light was over all;
 Why am I thus bereaved thy prime decree?
 The Sun to me is dark
 And silent as the Moon
 When she deserts the night.

Since light so necessary is to life,
 And almost life itself * * *
 * * * why was the sight
 To such a tender ball as the eye confined,
 So obvious and so easy to be quenched?

SAMSON AGONISTES.

But so nicely balanced, so exquisitely adjusted is every part of this beautiful structure, that the slightest variation from the normal condition will derange its functions and interfere with the accuracy of its impressions. A slight deviation from the precise standard of convexity of the surface, either of the crystalline lens or cornea, is sufficient to create a considerable amount of confusion of vision; and a degree of inflammation of the retina, which scarcely displays itself by visible symptoms, will, unless promptly checked, give rise to the most serious results.

If, then, the structure of the eye is so delicate and complicated that a very little derangement—a very trifling amount of disease is sufficient to render it wholly or partially useless,—is it not incumbent upon us as medical men to make ourselves fully acquainted with the various diseases to which it is subject, that we may be able to recognise them in their earliest stages, and by prompt and judicious treatment cut short changes which if permitted to go on would infallibly deprive the patient of vision? That frightful disease, purulent ophthalmia, requires the most prompt and energetic treatment from the earliest commencement, for so rapid and destructive is its progress, that if the surgeon fails to recognise it at once, a few hours will suffice for the destruction of the eye.

But it is a great mistake to suppose that the amount of danger to the eye bears a constant ratio to the external or visible appearances: on the contrary, some

of the most formidable diseases with which we have to contend, commence by symptoms so slight as to be almost unnoticed, and pursue their course by such insidious degrees that unless the surgeon is well aware of the symptoms denoting the presence of such affections, irreparable mischief may have taken place before any measures are adopted to check it. Such is too often the case in glaucoma—in the chronic inflammations of the iris, choroid, and retina—and in the various descriptions of amaurosis; all formidable from their commencement, and requiring both knowledge and judgment to control.

This point has been alluded to by a high authority,* and every surgeon who has had much opportunity of studying ophthalmic diseases will bear testimony to the truth and accuracy of his remarks. He says:—“It has many times fallen to my lot to be consulted by persons suffering from chronic inflammation of the retina, which has proceeded so far as almost entirely to destroy vision. They tell me that the eyes were not much reddened or painful in the first instance: they watered, and were somewhat intolerant of light; that after a time the sight became dim, and the intolerance of light diminished; that they then had recourse to spectacles, which scarcely at all improved vision, and that now they possess hardly any useful degree of sight. In other instances, they inform me that the medical gentlemen they consulted examined the eyes very slightly, and told them that their sight was getting weaker, and that they required spectacles, which they accordingly procured, and with which they certainly did see better for a short time, which encouraged them to continue their use and increase their power, until all but total blindness ensued. What must be the feelings of that surgeon who, in connexion with an unfortunate case of this description, felt constrained by truth to say, ‘This person, who is now condemned for life to blindness, consulted me when

* Richard Middlemore, “An Introductory Lecture.” 1839.

his complaint first appeared, and owing to my ignorance and inattention he is now deprived for ever of the blessing of sight?"

It has been well observed by another eminent author,* that "the serious responsibility which this view of the subject unfolds, will impel every conscientious man to turn his anxious attention to the affections of this important organ, and to embrace all opportunities of acquiring that knowledge which will enable him to act decisively and effectually on occasions of such momentous consequence."

Having thus pointed out, in I hope a sufficiently forcible manner, the importance of the subject, I will proceed to give an historical sketch of Ophthalmic Science.

It would be in vain for me to attempt to trace, step by step, its progress from the earliest records; for the bare enumeration of the titles of the works that have been published upon the subject would extend this lecture far beyond reasonable limits. I shall therefore content myself with pointing out such particulars as appear to possess interest or excite curiosity.

There is good reason to believe that the Ancient Egyptians, as well as the Greeks and Romans, were by no means ignorant of the diseases of the eye; for traces of such knowledge are to be found in many writers. Ophthalmia has been endemic in Egypt in all ages; and the greatest of her princes, Rameses the Second, or Sesostris, became blind, and being unable to endure the privation, committed suicide. Pheron, who was his son and successor, was however more fortunate; for after having been blind for eleven years, his sight was restored by operation; but what was the nature of the disease, or the operation, cannot be known, and must remain a matter of conjecture. Herodotus alludes to the science, and Hippocrates gives directions for the treatment of certain ophthalmic affections. The works of Celsus contain proofs of his

* W. Lawrence, "A Treatise on the Diseases of the Eye." London, 1841.

having given the subject much consideration; and the sixth chapter of his sixth book, and the seventh of his seventh book, afford a really excellent account of cataract, and the operation for depression, with full directions as regards general treatment. Every one who reads this account must be struck with the sound judgment and practical good sense which characterise it.

Galen has written upon diseases of the eyes, and advocates large bleeding and free purging in ophthalmia: he recommends as an external application the whites of eggs beaten up with water.

Pliny distinctly alludes to two modes of operating for cataract—"squamam in oculis emovendam; potius quam extrahendam"—and gives a variety of receipts for various diseases of the visual organs.*

Avicenna,† Ætius, and Rhazes, have all written upon the subject; and much curious information is to be gleaned from them.

From the time of these ancient writers until a comparatively recent period, medical science appears to have retrograded rather than advanced. The grossest ignorance prevailed during the Middle Ages; and the treatment of ophthalmic diseases was, for the most part, abandoned to quacks and empirics. Here and there however, traces are to be found of the subject having occupied the attention of regular practitioners; if, indeed, they were worthy of that name, who were, generally speaking, but one degree removed from quacks, as regards their acquirements or the amount of knowledge that they possessed.

In an old black letter volume,‡ published in 1543, during the reign of Henry the Eighth, I found several articles devoted to diseases of the eyes. As a specimen of the practice pursued in those days, I have selected the remedies there ordered for the cure of opacities of

* Plinius, *Naturalis Historiæ*, lib. xxix.

† Avicennæ *Arabum Medicorum principis*, lib. 3, Fen. iv. cap. xv. to xxi.

‡ Vigo's *Works in Chirurgie*. 1543.

the cornea, or, as the author expresses it, "for the spotted or blemish in the eyes called Macule."

He says: "Take of the substance of apples roasted under cooles, ʒiij; of woman's milk, ʒi; the yolkes of two egges; stampe these foresayde thynges together, and afterwarde applye them upon the eye in y^e fourme of a plaister."

As a collyrium, he recommends a stew of raisins in the broth of a lean chicken; and also a wash, in which the broth of partridges, capons, and ox-gall, are ingredients.

To shew the barbarous ignorance of the oculists, I may quote the practice followed by one Woolhouse, a man of note, resident in Paris, who thus treated ophthalmia. He was in the habit of scarifying the inflamed eye and eyelids with the sharp beards of barley and rye made into a brush, and forcibly rubbed on the conjunctiva; he then, to prevent adhesion between the wounded membranes, used to insert a barleycorn between the eye and the lid! It makes one shudder to think of the sufferings the patients must have undergone, and the dreadful inflammation such violence must have excited in the already inflamed and sensitive organ.

It is a relief to turn from such descriptions to the more enlightened and rational views contained in the writings of Wiseman,* contemporary of Ambrose Parè, and sergeant-surgeon to Charles the Second.

This illustrious man evidently possessed an acute mind, great original talent, and strong good sense. He has treated of diseases of the eye in a masterly manner, and his observations upon strumous ophthalmia redound greatly to his credit; for he traced the disease to its origin, and has recorded excellent rules for the constitutional treatment necessary in such cases, laying stress upon the importance of attention to diet, the state of the skin, and of the secretions generally.

Mead,† who flourished in the early part of the

* Wiseman: Several Chirurgical Treatises. 1676.

† Mead's Medical Works. 1762.

eighteenth century, devotes a chapter to diseases of the eye; and recommends, as an application in opacities of the cornea, or "albugo," as they are sometimes called, equal parts of pounded glass and sugar-candy to be blown into the eye; which he supposed would wear away the opaque substance by attrition! He also advises salivation in amaurosis, and seems to lay claim to priority in doing so. Numerous other writers have evidently bestowed both labour and talent upon this important subject; but it is melancholy to find that it was not until a very recent period that ophthalmic diseases received the attention in this country that they merited, although they had long engaged the notice of some of the most distinguished of the continental surgeons.

It is sad to reflect that a subject so important in all its bearings should have been abandoned to grossly ignorant empirics for such a lengthened period as it was in England; we have a lively picture of the position it here held in the early part of the last century, in a work by Dr. Turner,* published in 1732. The Doctor thus quaintly addresses his professional brethren, when speaking of oculists.

"Being upon this theme, I cannot choose but admire that none of *you* gentlemen, who are so well acquainted with the structure of this noble organ (the eye), should take upon you, among other chirurgic operations, that most noble one of couching the cataract. 'Tis you indeed, that are alone qualified; but the fear of mis-carrying at the first setting out, and loss of credit thereby attending, as also perhaps it might lessen a general practice, should you become conspicuous for this,—has I doubt withheld you, and made room for those bold intruders who, assuming the name of oculists, are daily committing the most irreparable mischief, as I could evince if there was occasion, from many, very many observations of my own upon their ignorance as well as knavery.

* Turner's Art of Surgery, 1732.

“One of the most noted of these men in some discourse I had with him, acknowledged ingenuously his ignorance in any theory of vision—the mechanism of the organ, or propriety of medicaments, affirming further, that if he succeed once in ten times in the operation of depressing the cataract, it was as much as he desired, *that one* extolling him more than the other nine could sink his reputation; whereas, continued he, if such as you were to undertake this work, and could not recover nine in ten, you would be accounted bunglers.

“Let me then conjure you, gentlemen,” he continues, “no longer to neglect this operation, nor to suffer the most genteel part of our art to be usurped by those intruding impostors, who leaving their proper occupations turn eye-quacks, although they know nothing of the sublime subject they work upon, no more than the *materia medica* with which they work.” And again:

“The very name of oculists has in my remembrance implied little else than fraud, cozenage, or downright picking the peoples’ pockets, extorting large sums of money, and warranting a cure, where the same is absolutely impossible.”

The oculist who excited the greatest attention at this time, was a quack of the name of John Taylor, more commonly known as ‘the Chevalier Taylor.’

This man had travelled over a considerable portion of the Continent, and received much attention, for not only had he been noticed at several courts, but was made a fellow of more than one learned society, as he informs us in a work published in 1736, entitled “A Treatise on the Diseases of the Chrystalline Humour.” In this book, after reviewing and rejecting the views generally entertained of the nature of cataract, he states his opinion that it is caused by a *præternatural*, forcible, and irregular contraction of the muscles of the eye, by which the lens is squeezed and rendered opaque, and this he considers is the consequence of the eye being much used on small or distant objects.

Glaucoma he describes as a disease of the crystalline

induced by præternatural viscosity of the blood, and much more to the same purpose. The book is written in a pompous and inflated style, and was severely criticised soon after its appearance, in an essay entitled "Dr. Taylor couched for a Cataract," by an anonymous author, who is, however, by no means free from gross error himself.

I will, however, not detain you by dwelling longer on this ungrateful subject, or the proceedings of these ignorant men; but it is gratifying to find that notwithstanding the oculists were so long permitted to retain the almost exclusive practice of the eye, it is not to them, but to educated surgeons that we are indebted for all the most important discoveries and operations upon that organ.

It is only when the diseases of the eye have been the object of the attention of general pathologists, that any real progress has been made in regard to them. The investigation of the nature of morbid actions and changes has been the most striking feature of the labours of this class of individuals; and to the philosophical spirit of research with which they have pursued the subject must be attributed the valuable improvements which they have made in the treatment of the diseases of the organ in question. I will now instance a few of the most striking of the substantial benefits conferred upon mankind by these men.

The operation of extraction of the cataract was evidently known to the ancients, but it was reserved for M. Daviel, a French naval surgeon, to bring it to a considerable degree of perfection, and to publish the first good account of it.*

Perceval Pott, surgeon to St. Bartholomew's Hospital, was the first to propose the operation for solution, or breaking down the cataract with a needle, to cause its removal by absorption.†

* Daviel *Memoires de l'Academie Royal de Chirurgie*. 1787.

† Pott's *Chirurgical Works*, 1808 (first published, 1775).

To Mr. Saunders* belongs the credit of modifying and applying the operation of solution by incision through the cornea, to congenital cataracts in infants, and the operation for artificial pupil was first practised by the celebrated Cheselden.†

Thus then we see not only that ophthalmic surgery is mainly indebted to regular practitioners, but that its largest amount of obligation is due to English surgeons.

To the Germans belong the credit of being the first to rescue ophthalmic surgery from the hands of empirics, and to raise it to its legitimate position; but the Austrians have the honour of setting the example of establishing schools for instruction in this branch, for it was at Vienna that the first ophthalmic school was set on foot. Barth has usually the distinguished credit of having been the first to originate it; but there is good reason to believe that this is incorrect, and that the real founder was Pallucci, an Italian physician, who was brought by Van Sweiten (the organiser of the medical school at Vienna, under the auspices of the Empress Maria-Theresa) from Florence to Vienna. He was an expert operator, and the first who removed with forceps an opaque capsule through an opening in the cornea.

Professor Barth was however the first teacher of ophthalmic surgery in the Austrian dominions (for Palucci was not a lecturer), and to him is deservedly attached the highest honour. When but eighteen years of age, he was appointed Professor to the University, an office which he filled for many years with the greatest reputation. Palucci was an advocate for the depression of the cataract, but Barth was a most expert extractor, and his mode of operating was remarkable for its simplicity and independence. He did not require an assistant; but placing the patient, standing

* A Treatise on some Practical Points relating to the Diseases of the Eye, 1811.

† Cheselden. Philosophical Transactions, 1728.

in the corner of a room near the window, he opened the lids and commanded the eye with one hand, whilst he passed the knife through the cornea with the other.

Schmidt succeeded Barth, and published several admirable treatises on iritis, cataract, and diseases of the lachrymal organs.

But the great ornament of the Austrian school was George Joseph Beer, who was for many years the assistant of Barth, and acquired much renown as an author, an operator, and a teacher. He was a good anatomist, and of high scientific attainments. It was his superior education combined with his talents which gave a higher tone to the subject he professed, and tended in a great degree to rescue ophthalmic surgery from the hands of the ignorant and unprincipled oculists, who until his time had in a great degree retained possession of the field. Beer was a voluminous writer, and published many valuable works: his views are embodied in "Weller's Manual of the Diseases of the Eye," translated by Dr. Monteath of Glasgow.

Having thus brought the history of ophthalmic science in Austria up to the present date, it is sufficient for me to add that the reputation of the Viennese school is fully sustained by Dr. Jaeger and Professor Von Rosas.

The individual who was destined to elevate ophthalmic surgery from the degraded position it had so long held in this country was John Cunningham Saunders, a name which must always be pronounced with reverence, as the founder of one of the noblest charities of which this Metropolis can boast—the Royal Ophthalmic Hospital, at Moorfields. Dr. Holscher, surgeon to the Court of Hanover, who visited England in 1817, thus bears honourable testimony to the worth of Mr. Saunders, in a letter written (at that time) to Professor Himly of Gottingen. He says, "It is only since the time of John Cunningham Saunders, justly and honourably known to Germany by his admirable

works on the eye, that this department of surgery has been raised in England to the dignity of a science. English surgeons, convinced that he who is not master of the whole science can never excel in any part, now feel the necessity of redeeming from the hands of empirics, as ignorant as unprincipled, this most interesting department of the healing art."

Mr. Saunders arrived in London from Barnstaple in 1795, a friendless student without a single introduction. He entered at Guy's and St. Thomas's schools, and at the end of two years had made such progress that he was appointed Demonstrator of Anatomy at Saint Thomas's, and also Dresser under Sir Astley Cooper.

Mr. Saunders first issued proposals for a charitable institution for the relief of diseases of the eye and ear, in October 1804, and in consequence "the London Dispensary for curing Diseases of the Eye and Ear," was opened for the reception of patients on the 25th of March 1805. Under this modest and unassuming title was the Royal Ophthalmic Hospital first established.

But the useful life of Mr. Saunders was destined to be brought to a premature close, for after acute and prolonged sufferings he expired in a fit of apoplexy on the 9th of February 1810.

It is to Mr. Saunders that we are indebted for the happy application of the power of absorption to the cure of cataract in infancy; for although Perceval Pott, Scarpa, Richter, and Hey, advocated and improved the operation for removing cataract by absorption in the adult, its successful application to the disease in infants is entirely due to Mr. Saunders. To him also we owe the first clear explanation of the cause and real nature of granular lids occurring after violent ophthalmia, and the manner in which by mechanical irritation they produced opacity of the cornea — a discovery of great importance, as the disease had long baffled all the skill and intelligence of the profession. These and other meritorious deeds have caused the

name of Saunders to be inscribed amongst those illustrious characters who may fairly be considered to have been the benefactors of mankind.

To Dr. Farre too, the friend and colleague of Saunders, much gratitude is due, for the zeal with which during a long life he has promoted the interests of ophthalmic science.

I may now perhaps allude, without impropriety, to the origin of the North London Ophthalmic Institution. The idea of establishing such a charity had been entertained by me for a considerable period before I was enabled to carry my views into execution. With the conjunction and assistance of my colleagues, Dr. Twining and Mr. Coote, this institution was set on foot, and opened for the relief of the poor on the 3d of January 1842.

We are fully sensible of, and deeply grateful for, the valuable patronage and kind support our undertaking was favoured with from his late Royal Highness the Duke of Sussex * (whose lamented decease we must all most deeply deplore), as well as from our friends and many benevolent individuals: but we hope that the good which has been already achieved—for we have relieved nearly five hundred persons—and the increased benefit which further support will enable us to extend to deserving objects, will prove to them and to the world at large, that their charity has not been misapplied, but has been bestowed upon an institution which bids fair to be (I hope I may say without vanity) one of the most useful charities of this Metropolis.

I will now, gentlemen, offer a few remarks, which will not perhaps be irrelevant in this introductory lecture.

* His late Royal Highness manifested the greatest interest in the success of the Institution. On accepting the office of patron he wrote an autograph letter to me expressive of his good wishes; and upon several occasions (the last of which was but a few weeks before his death) inquired particularly how it was getting on, entered minutely into the details, as to the number of patients, description of diseases, amount of funds, etc., and emphatically expressed his opinion as to its utility and his good wishes for its success.—
W. W. C.

The study of ophthalmic diseases must, like other scientific investigations, be conducted in a systematic manner, to be attended with success. It is not sufficient that an occasional look is to be taken at one case, and a hasty glance at another. The diseases of the eye require patient investigation, unwearied attention, and careful comparison. We must approach them with minds unfettered by prejudice, if we wish to ascertain the truth. We must bring with us a most attentive eye and reflective mind. We must not set out by establishing arbitrary views, and see only through the false medium they convey. We must not attempt to bend nature to any set rules or principles; but be satisfied with observing her phenomena, carefully reflecting upon them, and adapting our views in accordance.

The phenomena which are presented to our notice are ever varying; and there is *no* case, I may venture to say, from which some instruction is not to be derived. The man of observation will find that the more he studies nature, the more he will be satisfied with the results of his labours; for new truths and new phenomena will be constantly presenting themselves, to reward his zeal; besides which, the habit of observing will be greatly improved by practice, and after a time will become a pleasure rather than a labour. He will acquire the skill to distinguish important from unimportant symptoms; to select those which will assist him in forming his diagnosis, and to reject those which do not bear particularly on the individual case.

But it is not by observation alone that you are to gain your knowledge of ophthalmic diseases. No man is justified in placing sufficient confidence in himself to reject the accumulated knowledge and recorded experience of others. Were he to do so, he would be placed in the position of the earliest observers, and have slowly to work out for himself problems which have been already solved and elucidated by those who have preceded him.

By a careful perusal of the best works on any subject, the student will gain a vast amount of information ready to be brought to bear when occasion may require: he will avail himself of the labours of others, and in a single evening may make himself master of the accumulated knowledge and experience of ages. Besides which, he will be directed in the right path; he will see what to select, and what to avoid; he will profit by the dearly-bought experience of his predecessors; and will learn to distinguish what is of importance from what is indifferent or irrelevant—to recognise the characteristics of each disease—to assign to symptoms their proper value and due weight; he will know what to expect, and be able to quiet the fears of the patient and the apprehensions of his friends: from the confidence which united erudition and intelligence is sure to impart, he will acquit himself with credit in whatever position he is placed.

Far different will be the feelings of that man who by his ignorance is rendered incompetent to the management of a critical and difficult case. He will be embarrassed by every symptom; his mind agitated by alarm; unable to tranquillise the anxiety of those around the patient, to whom his alarm will speedily extend; uncertain what to order, and fearful of doing wrong, he will present a melancholy picture of distress and incompetency, which must for ever degrade him in the estimation of the beholders, and materially injure his professional reputation.

And now, gentlemen, it is desirable that I should briefly point out to you the books that I would recommend you to study upon this subject. As I have before said, there is a very formidable catalogue to select from; but I think it better not to embarrass you with a long list, but to point out certain standard works, which contain the essence of all that has been written, beside conveying sound practical information deduced from experience.

The chief of these are, Mr. Tyrrell's practical work

on the diseases of the eye;* Mr. Lawrence's treatise† on the same subject; and the elaborate works of Mr. Middlemore of Birmingham,‡ and Dr. Mackenzie of Glasgow.§

Mr. Tyrrell's work is purely practical, and confined to the description of diseases, their treatment, and the operative surgery of the eye, as practised by himself. The views entertained by Mr. Tyrrell differ materially from those of most other writers; particularly as regards the question of depletion, and the application of powerful stimuli to the eye. The latter he condemns *in toto*, and recommends a very moderate amount of depletion, generally speaking; but lays great stress upon general treatment. I am bound to say that, after considerable opportunities of deciding upon the various methods of practice, I have found that of Mr. Tyrrell to be most certain, most efficacious, and the results most satisfactory.

The treatises of Messrs. Lawrence, Middlemore, and Mackenzie, are highly valuable. They contain an immense amount of information, and a summary of the opinions of the writers of all ages and countries; so that they may be studied with great benefit. I must not pass over the very excellent description of the anatomy and physiology of the eye with which Mr. Lawrence prefaces his account of the diseases. Though brief, it contains every point of importance, and is written in a remarkably clear and comprehensive style.

The greatest amount of information on the anatomy of the eye is contained in Mr. Dalrymple's very excellent treatise;|| and the works of Zinn¶ and Soemmering** are distinguished by the greatest fidelity, both as

* A Practical Work on the Diseases of the Eye. London, 1840.

† A Treatise on the Diseases of the Eye. London, 1841.

‡ A Treatise on the Diseases of the Eye and its Appendages. London, 1835.

§ A Practical Treatise on the Diseases of the Eye. London, 1840.

|| The Anatomy of the Human Eye. By J. Dalrymple. London, 1834.

¶ Descriptio Anatomica Oculi Humani Iconibus Illustrata. 1755.

** Icones Oculi Humani. 1804.

regards the description of the anatomy of the eye with its appendages, and the plates, which are equally accurate and beautiful.

These, then, are the principal works to which I would direct your attention. If you are desirous of extending your reading, there is ample scope afforded you in the multitude of books on the subject of the eye with which English and Foreign literature abounds.

The admirable treatise of Mr. Saunders on some important diseases,* and that of Mr. Wardrop on the morbid anatomy of the eye† may be particularly recommended. For the operative surgery, besides the four principal works I began by alluding to, Mr. Guthrie's elaborate lectures‡ may be consulted with advantage; and the synopsis of the diseases by Mr. Travers,§ contains much that is deserving of being read. Dr. Vetch|| and Mr. Edmonston¶ have published the best accounts of purulent ophthalmia, as it appeared amongst the troops on their return from Egypt. Those who are desirous of becoming acquainted with optics and the physiology of the eye would do well to refer to the works of Porterfield,** Haller,†† Mackenzie,‡‡ and Brewster.§§

The plan which we intend to pursue with regard to this course of lectures, is to combine practical instruction in operating, with a full description of the anatomy, physiology, and diseases of the eye. Those gentlemen who enter to the lectures will be free to attend the practice of the institution, and we shall avail ourselves of every opportunity of pointing out to them examples of the diseases in the patients that present themselves.

* A Treatise on some Practical Points relating to the Diseases of the Eye. By J. C. Saunders. 1811.

† The Morbid Anatomy of the Human Eye, 1819.

‡ Lectures on the Operative Surgery of the Eye, 1830.

§ A Synopsis of the Diseases of the Eye, 1824.

|| An Account of the Ophthalmia in England, etc., 1807.

¶ A Treatise on the Varieties and Consequences of Ophthalmia, 1806.

** A Treatise on the Eye, the Manner and Phenomena of Vision, 1769.

†† Elementa Physiologiæ, 1763.

‡‡ The Physiology of Vision, by W. Mackenzie, M.D., 1841.

§§ A Treatise on Optics, by David Brewster, LL.D., F.R.S., 1833.

Mr. Dalrymple will in his first lecture demonstrate the value of minute anatomy in relation to the investigation of the obscure maladies of the eye, and shew how much an accurate knowledge of ophthalmic diseases tends to the elucidation of the affections of more hidden organs, as in no part is the *modus operandi* of medicines so well seen as in the eye. He will then proceed to give the microscopic anatomy of the tissues entering into its composition, and the special anatomy of the organ and its appendages. The second part of his course will be devoted to cataract, and a demonstration of the various operations; and lastly, the pupils will be practically instructed in the performance of them.

Dr. Twining will demonstrate so much of the laws of optics as are necessary for understanding the physiology of the eye—will explain the various problems and facts connected with its phenomena, and consider the changes and derangements of the eye and its appendages, which result from an abnormal condition of the nervous tissues.

Mr. Coote will elucidate the various affections of the orbit and the ocular appendages, and the different tumours, malignant and otherwise, to which the eye is subject; and I shall fully describe and consider the symptoms, effects, and treatment of that very numerous and important class of diseases—the inflammatory, which of all others fall most frequently under the cognizance of the medical man.

In conclusion, gentlemen, I would venture to express a hope that these lectures may not only be productive of good, by the information they will convey on the important subject of diseases of the eye; but that the interesting points which will be brought before you in anatomy, physiology, and optics, may open a field of inquiry on ground which has been as yet but little explored, and offers much encouragement to the industrious cultivator. These pursuits will, I am sure, amply repay the laborious investigator of Nature's truths; he

will find therein a source of pure satisfaction; an elevation of mind, which nothing but intellectual resources can supply. In the eloquent language of that great and gifted man, of whom his countrymen have just reason to be proud—I mean Sir John Herschel—language which, beyond a doubt, conveys a faithful picture of his own sentiments and feelings:* “The natural philosopher, accustomed to trace the operation of general causes, and the exemplification of general laws in circumstances where the uninformed and uninquiring eye perceives neither novelty nor beauty, he walks in the midst of wonders: every object which falls in his way elucidates some principle, affords some instruction, and impresses him with a sense of harmony and order; nor is it a mere passive pleasure which is thus communicated: a thousand questions are continually arising in his mind: a thousand subjects of inquiry presenting themselves, which keep his faculties in constant exercise, and his thoughts perpetually on the wing, so that lassitude is excluded from his life, and that craving after artificial excitement and dissipation of mind which leads so many into frivolous, unworthy and destructive pursuits, is altogether eradicated from his bosom.”

* A Preliminary Discourse on the Study of Natural Philosophy, by Sir J. F. W. Herschel.

2, Tenterden Street, Hanover Square,
May, 1843.