islands does phthisis least prevail? Where is oxidation so keen that gout is burnt and purged away? Let us know what diseases are promoted and what are prohibited by the *genius loci*; let us take the great forces of external Nature into our confidence, and we shall be able to control disease by greater agencies than the druggist can supply.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OPHTHALMOLOGY.

*At the Annual Meeting of the British Medical Association,
held in Bournemouth, July, 1891.*

By N. C. MACNAMARA, F.R.C.S.,

Surgeon to the Royal Westminster Ophthalmic Hospital.

ON CERTAIN POINTS IN OPHTHALMIC PRACTICE.

GENTLEMEN,—Our President and the Nomination Committee of the Association having kindly invited me to preside over this Section during our meeting in Bournemouth, I wish to open our proceedings with a few remarks on subjects connected with the practice of ophthalmic surgery, which, so far as I know, are not referred to in any of the papers to be brought before us on the present occasion.

The Treatment of Immature Cataracts.—With reference to this subject, the question I wish to propose is: Are there any valid reasons why we should not treat immature in the same way as we treat cases of matured cataracts? The answer commonly given to this question is, Yes; because in immature cataracts, a portion of the cortex of the lens being transparent, it follows that during the extraction of such a lens some of this transparent matter is likely to be left in the anterior chamber of the eye, and will probably excite inflammation of the iris with all its consequences. There can be no question as to the fact that violent inflammation of the iris frequently follows injuries inflicted on the eye by which the capsule of the lens is ruptured, and, the soft cortex being liberated, comes to rest on the iris. But in these cases there is often a wound in the outer covering of the eyeball through which septic matter enters the eye, and causes inflammation in the damaged tissues independently of any influence which the soft cortical substance may exercise on the iris. It may be a traumatic cataract is produced without a wound either in the cornea or sclerotic; nevertheless violent inflammation occurs in the eye, which must therefore have arisen independently of septic matter. In many cases of this description, the aqueous gains access to the substance of the lens, and causes its cortex to swell to such an extent that it exerts abnormal pressure upon the angle of the anterior chamber, and leads to symptoms of acute glaucoma. Lastly, in all cases of traumatic cataract, it is most probable after the capsule is ruptured that some of its cells escape, and, becoming attached to the iris, grow, exciting hyperæmia and not infrequently inflammation of the iris. But, granting all this, it does not follow that inflammation of the iris results from the presence of aseptic cortical matter in the anterior chamber after the operation of extraction. In every such proceeding we should keep the eye absolutely free of septic matter, and by far the larger portion of the lens, even in immature cataracts, being removed, that which remains cannot well exercise injurious pressure upon the angle of the anterior chamber. So that, in the extraction of an immature cataract, two of the most frequent causes of inflammation as met with in traumatic cases may be avoided, for we can keep the anterior chamber aseptic, and also avoid intraocular tension produced by the pressure of the lens on the spaces of Fontana.

I have long taught that the operation of extraction is successful in proportion to the completeness with which we remove the lens and its capsule from the eye. But I cannot understand why soft aseptic lenticular matter should cause iritis, although it remains in contact with the iris; there is no evidence in support of the views held on this subject by Pagenstecher and Graefe, that soft lenticular matter acts chemically as an irritant when applied to the iris. On the other hand, we frequently find clots of blood and pus pass from the

anterior chamber, and there is no reason why cortical matter should not be carried away through the lymphatics of the eye. I can understand this soft material plugging the lymphatics in its passage outwards, and so, perhaps, impeding the circulation of lymph, and in this way producing glaucoma; but we have no evidence of any such pathological changes. Doubtless, if the capsule with its living cell protoplasm comes to rest on the iris, it may form connective tissue, and produce an after-cataract; but an accident of this kind is as liable to occur in the extraction of a mature as it is after the removal of an immature cataract.

If from considerations such as these, and above all from the results of practice, we arrive at the conclusion that there is no special reason why we should not extract an immature cataract, I need hardly dwell on the great advantage which may be derived from such a proceeding in cases of advancing cataracts in both eyes. How frequently we are consulted by persons who may have reached the age of 60 and upwards, complaining of failing sight caused by opacity of the lens. Such a person may be able to get about by himself; he may be able to count fingers with both eyes, and even read No. 4 Snellen with the best eye, and No. 7 with the other eye, nevertheless he can no longer read ordinary type with comfort, and has an ever present feeling that with the loneliness of advancing years he is doomed to suffer loss of sight. The mental depression arising from a state of things such as this can hardly be realised unless by those who have gone through it. To tell a man in these circumstances that he must wait, it may be for two or three years, until the cataract has fully formed in one eye, is a sentence which none of us would pass if it were in our power to remove the cause of the impaired vision without serious risk to the eye.

The idea I wish to enforce is that it is a mistake to condemn a patient suffering from cataracts in both eyes to wait for an operation until the cataract in one eye has become matured. I would go a step further, and state my conviction that the results following the extraction of immature cataracts are more favourable on the whole than those of fully formed cataracts, because in the former the lens escapes from the eye with less damage to surrounding structures than it does when a large hard cataract has to be extracted. But in making this statement I would guard it to the extent that I hold it necessary for the successful extraction of an immature cataract that a sufficiently large opening should be made in the cornea to allow the lens to pass through it with ease; that an iridectomy is performed, and this is best done at the time of the extraction; lastly, after rupturing the capsule of the lens, gentle and continued pressure with the curette must be made upon the lower portion of the cornea, the curette following up the lens as it passes outwards through the section made in the cornea. Unless the cataract in its passage outwards is followed up in this way, it is apt to get entangled by the iris or between the lips of the wound, and some of its cortex with the cells lining the capsule remain in contact with the iris.

I do not propose to prop up the views I have expressed by parading before you the results of my own practice, but I am much indebted to my assistant, Mr. Urquhart Black, for a list of cases and their results, which he has carefully compiled for me. The study of these cases has been useful in that it reminds me of patients who have been under my care, and enables me confidently to recommend the proceeding, which is far from being a novel one, of extracting an immature cataract when both eyes are affected, so soon as the patient is inconvenienced by the increasing opacity of his lenses. I make the degree of impairment of vision depending on the changes in the lens my guide as to the advisability of recommending extraction rather than the stage of maturity at which the cataract has arrived.

Among the upper classes, especially those over 65 years of age, I believe it is safer, having first applied a solution of cocaine to the eye, to get a thoroughly competent person to administer an anæsthetic to the patient before operating. If an anæsthetic is administered the eyelids should, after the operation, be smeared over with an ointment of vaseline and iodoform, and a carefully adjusted pad of antiseptic wool applied over the eye with a linen bandage, our object being to keep some pressure on the eye for twelve hours, or until all inclination to sickness has passed away, when a light cotton

pad and elastic bandage should be substituted for the first dressings. Unless symptoms arise indicating the use of atropine, eserine, or cocaine, I never drop a solution of either of these drugs into the eye after the operation for extraction. The patient can sit up on the third day after the operation, but I am sure that the greater the care we take of the eye, for at least a fortnight, the better will be the result.

Hypermetropia and Glaucoma.—We are in a position now to state that glaucoma depends either upon some mechanical obstruction to the escape of fluid through the lymphatic system of the eye, or upon an excessive secretion of lymph within the globe of the eye. Probably in some cases of acute glaucoma both these conditions are present. Landolt and other observers describe the circular fibres of the ciliary muscle as being hypertrophied in cases of hypermetropia. Changes of this kind might have some significance with reference to the circulation of lymph through the ciliary region, but Mr. E. Treacher Collins—from measurements he has made—is disposed to think that the breadth of the ciliary muscle varies at different periods of life, and that other circumstances must be taken into consideration before we attempt to found a theory regarding hypertrophy of the ciliary muscle as resulting from the increased work which it is called upon to perform in cases of unrelieved hypermetropia. Nevertheless, increased muscular action necessitates an augmented supply of blood to the part, and so to serous effusion, and in the course of time to pathological changes in the tissues involving the lymphatic structures, and, probably, also to branches of the nerves passing through the ciliary body. Consequently, long-continued hypermetropia tends to produce obstruction in the lymphatic system of the eye, and in this way we may form some idea of the connection between cases of hypermetropia and glaucoma. It tends to confirm this idea when we find, in specimens made from glaucomatous eyes in the early stages of this disease, that the blood vessels in the ciliary region are notably increased in size and number; beyond this, the tissues forming the angle of the anterior chamber are crowded with round cells, and, in not a few instances, the lymphatics in this situation are blocked to a greater or less extent.

As a general rule, in cases of hypermetropia, the curvature of the cornea is not below the average, but there are exceptions to this, and I have met with instances of hypermetropia in which the patients have had a distinctly flat cornea and a very shallow anterior chamber, the tension of the eyeball being perfectly normal. In one instance of this description several members of the same family had this shallow anterior chamber and hypermetropia, and it is remarkable that this formation of the eye seems to have been hereditary. The person to whom I refer, when about 57 years of age, developed symptoms of glaucoma, and there is good reason to believe that in previous generations his predecessors had also suffered from this disease. This is by no means an exceptional case. I have other patients—and some of them have been under my observation for a considerable time—in whom glaucoma has supervened in hypermetropias in conjunction with a flat cornea and shallow anterior chamber, so that I no longer question the connection that exists between this form of eyeball and glaucoma.

In eyes such as those to which I have referred, not only does the angle of the anterior chamber differ in form from that of the normal eye, but the hypermetropia is apt to lead to pathological changes in the tissues constituting the ciliary body, and so to impaired circulation of lymph in the eye, and to faulty innervation of the iris; the pupil, therefore, acts imperfectly, and remains somewhat dilated. Given these conditions, if from any exhausting cause the contractile fibres of the iris are still further relaxed, and the pupil becomes widely dilated, the iris shrinks upon its attachments, and so tends further to obstruct the already embarrassed lymphatic circulation through the ciliary body. In these circumstances an attack of acute glaucoma may occur at any moment, and be as quickly relieved by the application of eserine to the eye, which, as the pupil contracts, draws the iris from the angle of the anterior chamber, and so frees the spaces of Fontana and the passage of lymph from the eye.

I am anxious to draw attention to this subject because the experience I have gained in the treatment of cases such as those referred to is that the glaucomatous symptoms

may be prevented by making the patient *constantly* wear proper glasses, and applying eserine to the eye once or twice a week if the pupil is inclined to remain dilated or the patient has a tendency to increased intraocular tension. Our object is to give the ciliary muscle rest, and to keep the pupil contracted. A person with a flat cornea and hypermetropia, or hypermetropic astigmatism, which most frequently exists in these cases having a tendency to glaucoma, may, if treated in this way, continue his work with impunity, often for many years; which he certainly would not have done had we performed an iridectomy at an early stage of the disease for the relief of the increased tension and other symptoms of glaucoma.

Influenza and Optic Neuritis.—I wish very briefly to refer to this subject, with the object of eliciting information from practitioners who may have met with cases of affections of the eye in connection with this zymotic disease. Since the early part of 1890 up to the present time, I have seen three male patients and one female suffering from double optic neuritis, which came on while they were passing through an attack of influenza. In these cases the patients' sight had been perfectly good until they were seized with influenza, and there was no evidence of any intracranial affection, albuminuria, or any other cause with which we could associate the affection of the optic papilla from which they suffered.

In the first case that came under my observation, the patient had been absolutely blind for some six weeks before I saw him. The appearances presented were those of intense papillitis, together with numerous hæmorrhages into the retina. This man has not regained the slightest perception of light, and the papillæ in both eyes are atrophied. The other three cases might be described as recent instances of uncomplicated papillitis with great impairment of vision; the discs in all three cases have gradually cleared, and the patients regained perfect vision.

These cases of papillitis, occurring in conjunction with influenza, appear to me to be analogous to those which I have elsewhere described as malarial peripheral neuritis.¹ It seems to me that they depend upon either direct local irritation produced by microbes on the optic nerve, or on the ptomaines secreted by these micro-organisms. In the first case I have referred to, the local disease was not only of great severity, but had also existed for so long a time before he came under treatment, that the papilla and retina were irreparably damaged. In the other three cases, whether from the effects of the mercurial treatment under which the patients were placed, or from other causes, the papillitis entirely cleared up. I shall be glad if these few remarks on this peculiar form of neuritis should elicit further information on the subject.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION FOR DISEASES OF CHILDREN.

At the Annual Meeting of the British Medical Association, held in Bournemouth, July, 1891.

By JAMES F. GOODHART, M.D., F.R.C.P.,
Physician to Guy's Hospital.

THE CHILD IS FATHER TO THE MAN.

GENTLEMEN,—It was not without much consideration that I determined to inflict an address upon you, at this, the commencement, of our session to-day; for it has always seemed to me that an introduction of this kind is much more of an opportunity for the "addressor" than for the "addressee," if I may venture to coin words which seem to convey their meaning well. So I put myself into the hands of the vicar's churchwarden, that is to say, of that honorary secretary of the section who was at my elbow, and he turned the scale in favour of unstopping my tongue. As he said, the responsibility I put upon him was great, as I fear you will presently know, but I must ask you to deal leniently with his error of

¹ *Diseases of the Eye*, fifth edition, p. 255.