sense of his responsibility to his patient to do the best in his power for him, and of his responsibility to the law, which has entrusted the patient to his care. From this point of view I can see no real difference between mechanical restraint and any other form of restraint which he constantly employs in his treatment of his patients, or the use of powerful drugs and other means of treatment. Under such circumstances I maintain strongly that at this time of day regulation by statute of a particular form of treatment is undesirable. In the earlier lunacy statutes, when the abuses of restraint were much nearer, no attempt was made to restrict it by statute; the matter was left as it should be—to the general progress of medical opinion. If it is maintained, on the other hand, that no right should be allowed ever to use mechanical restraint, that it should be absolutely forbidden by statute, that would be an intelligible position to take up, but one which, I think, any legislator would refuse to assume. I do not wish to enter into a discussion as to the use of mechanical restraint: for my purpose it is sufficient that I think we are nearly all agreed that it is in certain cases a justifiable method of treatment. Then all I plead for is freedom—freedom to use it as we use other means of treatment, without being branded with doing something which it needs an Act of Parliament to restrict, and which is associated in the public mind with all sorts of abuses and horrors.

The modern mild forms of mechanical restraint and the medical uses to which they are put are as distinct from the old forms of "coercion" as a modern hospital for the insane is from the old "madhouse"; and it is much to be regretted that this section, which gives colour to confounding the two and to perpetuating old ideas and prejudices, should have found a place in the latest Act of Parliament as to the care of the insane.

(g). Section 338, subsection 1, empowering the Commissioners in Lunacy to make rules is objectionable as being very dangerously wide in its terms, and opens the door (indeed, has already opened it, as is evident from the rules issued by the Commissioners, on the Act coming into operation) to the Commissioners under the head of rules, making enactments which in no sense differ from statutory ones, and have equal force. Throughout the Act, indeed, there is a distinct tendency to increase the powers and authority of the Commissioners, and to draw more tightly the reins of official control, a tendency which, in my humble opinion, is in the wrong direction as regards the influence of medical ideas, especially if we bear in mind the great preponderance of the legal and lay element in the composition of the Board, and the growing tendency to appoint as medical commissioners men who, however eminent and distinguished, have had no special experience of insanity and its treatment, or of the practical questions and difficulties connected with the management of asylums.

I have now, gentlemen, finished my task of criticism. It is for you to say whether I have or have not substantiated the general opinion which I ventured to express, that the latest form which lunacy legislation has assumed is, on the whole, retrograde and disappointing.

I should like, before I close this address, which has already run to a greater length than I intended or than I fear is acceptable to you, to say a very few words as to the future. It may be hoped that in time amendment will be obtained to some of the more objectionable provisions; but medical effort should be devoted to laying the foundations for a wider and sounder scheme of lunacy legislation when the time comes that the Lunacy Act, 1890, will, in its turn, be found wanting. I would venture, with diffidence, but still, with some confidence, to predict that in future legislation, if the medical profession is true to itself and the best interests of the insane, medical opinion and medical influence will have far more weight than they have at present. The following rough heads are indications of the directions in which I think reform should go:—

1. Insanity and its treatment ought to form an integral part of medical education and of medical examination.
2. No one should be allowed to grant a lunacy certificate without being possessed of satisfactory evidence of competency.
3. The same should apply, in a higher degree, to all seeking appointments as medical officers of asylums.

4. The appointment of district medical inspectors, and of official certifiers, who should act in consultation with the medical attendant.

5. Inspection should take more the form of provision being made for more frequent visitation of individual patients by independent medical authority, and less of mere inspection of the asylum itself.

6. Diminution of the bureaucratic character of the Board of Commissioners, and restriction of their powers, which are now extraordinary and unparalleled; and the Commissioners to form more a medical board, composed of men of special experience in the treatment of the insane, who should assume more responsibility in dealing with individual cases.

8. Great simplification in legal formalities, a vast number of which at present arise practically from doubt as to the efficiency of medical opinion and medical care. Medical officers of asylums ought to be relieved from all responsibility as to the correctness of certificates, orders, etc.

9. The cumbrous and costly method of finding a person insane by inquisition to be done away with or much simplified, and the visitation of those so found to be secured by the same means as are provided for the insane generally.

These ideas may seem very Utopian and more adapted for 1991, but, after all, even now, the medical opinion is the motor power, without which the most complicated legal machinery is practically a dead letter; and I feel satisfied that for the sake of the insane themselves, as well as for the more effectual protection of their friends and the public generally against the consequences of insane conduct and impulses, the proper course is to rely less on legal forms and restrictions, and more on the careful competent medical examination of the patient before admission, and the judgment and experience of the medical man to whose care he is entrusted, supplemented by the visitation of and opportunity of consultation with an independent medical authority.

The diagnosis of insanity, and the proper treatment needed for its varying forms are medical questions, although they must be carried on under legal restrictions. May we not hope that the time will come when these legal restrictions will become more sanctions and helps to proper treatment, and not, as they too often are now, hindrances and obstacles?

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PATHOLOGY.

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

By W. HOWSHIP DICKINSON, M.D.,

Senior Physician, and Lecturer on Medicine St. George's Hospital.

ON THE USES AND PROSPECTS OF PATHOLOGY.

THE science before us, that of pathology, must be regarded in its widest sense, not as concerning only the results of disease, but also its processes. In times not very remote, little was known of pathology but rough morbid anatomy, and very little of that. A few of the larger facts—the nature of empyema, for example—were known to the ancients, but I cannot find that conditions to us so obvious as hepatisation of the lung and cerebral hæmorrhage were recognised before the 17th century, though the symptoms in connection with them had long been known. Large morbid anatomy has advanced so much, especially during the last hundred years, that it may be believed that there are now few changes obvious to the naked eye which have escaped notice. This line of research may be thought to be nearly exhausted, but let us not neglect the old in the interest which attaches to the new. Rough morbid anatomy is the groundwork of medicine, and must ever be essential to the physician as presenting results in a compendious form. It may even happen that results thus broadly presented may be evident to the practised eye which the microscope might fail to make equally clear. Giving, therefore, full value to simple modes and broad results, let us briefly estimate what has been accomplished in other ways; see what has been done, and what we may reasonably hope for.

Something, what seems to us much, of minute morbid anatomy has been displayed with regard to most organs and tissues, but it is possible that those who come after us may regard our knowledge at best as absurdly incomplete, and exercise towards us the sort of charity which grown persons extend to a child. Of the more substantial organs, we probably know something which, though rough, cannot be altogether wrong. But what shall we say about the nervous system? We may say that within the last half century the minute morbid anatomy of the nervous system has been begun, and some lines of light, however dim and narrow, projected into places dark since the creation. If we have not seen all, we have at least seen that there is more to see; we have made darkness visible. Diseases once thought to be functional or without organic change, have been provided, some like essential paralysis, chorea, and diabetes mellitus, with something of morbid anatomy, however incomplete, while others, like tetanus and the paralysis of Landry, have been suspected, if not convicted, of being connected with poisons which, though less visible, are not less material. The mystery of the nervous system has not yet been solved, but, at any rate, we are upon its traces. Let us hold by what we have acquired while we hope for more, and trust to morbid anatomy to save us from such blindness as discerns behind the symptoms of cerebral hæmorrhage or meningitis nothing more material than a change in the electric condition of the nerve cells.

To pathological results—bare observations in morbid anatomy, whether large or small—it must be added that we have acquired some insight, however incomplete, into certain pathological processes so as to see, as through a glass darkly, by what means and in what way Nature, ever actuated by the best intentions, does the harm which it is the province of our Section to investigate. Foremost among such modes of going wrong comes the embolic, which is too well known to need further notice here than the bare reminiscence of how much of our present knowledge, especially of cerebral disease, is due to it. Next may be mentioned the suppurative, which has a double interest both in what it takes away and what it leaves behind. The loss of leucocytes, under the name of pus corpuscles, explains the relation of blood and pus—hitherto a mystery; and the lardaceous deposit as a consequence gives a morbid interest in what is left. We see in this something which may be expressed roughly, but perhaps not altogether untruly, by an elementary rule of arithmetic, that of subtraction—take pus from blood and lardaceous remains. This is important to the surgeon, for it shows how organic change is consequent upon a process which his art can often put a stop to; and it enhances the use of antiseptic methods by which this injurious exit may be prohibited. I do not imply that lardaceous disease has no other origin, for it is often brought about by syphilis, which is attended with a deficiency of blood corpuscles. It is to be suggested that, whether by escape or other modes of diminution, the balance of the blood is similarly disturbed.

Among pathological processes we may pause for a moment on the results which have been attributed to the excessive and deficient action of oxygen. The physicians who followed upon the great chemical discoveries of the end of the last century and the first half of this, and were, so to speak, brought up upon Liebig, dwelt upon oxygen as the paramount agent in pathology, attributed most diseases to either too much of it or too little, and considered it with too little regard to the vital action of the organism. Bence Jones, great as he undoubtedly was—and here let me contribute my humble branch towards keeping his memory green—posed too simply as the Apostle where Liebig had been the Precursor, and preached chemistry in *partibus infidelium* with a single eye to abstract material, to the neglect of the properties of living tissues and living organisms. The chemical school saw in inflammation only excess of oxidation or combustion, which may truly exist, and of which the increase of temperature may be a result; but they took too little account of what may be antecedent to this in tissue and vessel. In diabetes they saw little more than a deficiency of oxidation, which indeed there may be, but which must be secondary to changes in organic structure which as yet we have seen but imperfectly.

With regard to gout and uric acid as products of suboxidation, the chemists got to results which seem to embrace the

truth less incompletely, though even there there is probably something to learn of organic lesion or disturbance outside the domain of pure chemistry. We know something of hepatic disturbance in connection with uric acid. What more will be added, and to what organs and tissues it will relate, is work for the future.

As a definite result of suboxidation, I may point to what has been advanced with regard to hæmoglobinuria. This is closely allied to the symmetrical gangrene of Raynaud, and is associated with localised lividity of the skin. Professor Murri has found reason to believe that this lividity is due to the cutting off of the arterial current and the oxygen which belongs to it by vascular spasm (one of the recognised results of malaria), and that the destruction of corpuscles is due to the carbonic acid in the parts from which the oxygen is thus shut off. If this be so, we have a result of suboxidation which deserves a prominent place in chemical pathology. In corroboration of this theory I may mention a fact which came within my own knowledge. A young man who had never had any malarial affection, and was apparently in good health, ran in a race until he fell down from dyspnoea and exhaustion. The first urine passed afterwards was loaded with the disintegrated products characteristic of hæmoglobinuria.

A disease which presents itself as of chemical origin, if one due almost certainly to a specific deficiency in the constituents of the food may be so regarded, is scurvy—one of which the chemical secret has apparently been so nearly exposed that we ought to be almost within grasp of the chemical antidote. The conditions which give rise to sea scurvy are generally known. It is not probably as widely recognised that scorbutic affections are so common on shore—among infants brought up by hand—that this form of land scurvy is scarcely less important. It is to be attributed to the exclusion of fresh milk by various artificial preparations of it. Not that these preparations are in themselves injurious, but they are insufficient.

Milk in its fresh state, and of good quality, whether from biped or quadruped, is antiscorbutic; preparations or sophistications of it are not so, or not so to a sufficient extent. Scorbutic hæmaturia and scurvy rickets are but too frequent consequences of this substitution. We know the broad result, which is enough for practice, but we do not know the isolated want. What does fresh milk contain which is so essential and so difficult to preserve? We no more know this than what there is in lemon juice to be antiscorbutic, while neither citric acid nor potash is so. The problem is attractive, like a puzzle; some day it will be solved, and then we shall wonder why it was not solved before.

We now approach a field so vast and so imperfectly seen, that we cannot even discern its extent. So many disorders—it is enough to mention relapsing fever, anthrax, tuberculosis, and leprosy—have been shown to have foreign organisms associated with them, that we may be sure that before long many more will be in the same position. We may—indeed we must—find the essential principle of malaria, probably grossly vegetable: we may find that of syphilis, and can scarcely fail to find those of the infective fevers. But if we find a micro-organism for each disease, the question may still remain, what is the relationship between the two? Does the organism cause the disease, or the disease the organism? And if the organism be the cause of the disease, is it the immediate cause, or is the immediate cause something which the organism produces? Presuming that the bacillus is the essential cause, with or without an intermediary, it will still remain to consider the soil as well as the seed. Some seed falls on suitable ground and bears fruit an hundredfold, other seed falls on unsuitable ground with a negative result. Individual differences in the liability to disease play a large part in it.

Probably every person who walks a hospital or lives in a city receives habitually and abundantly the bacillus of tubercle; some become tuberculous, others do not. The difference must be in the man not in the microbe. The condition of the soil would seem to be of more practical importance with regard to tuberculosis than the presence of the seed. Why the bacillus sets up tuberculosis in one and not in another must be due to the fitness of the tissues for its retention and maintenance, in regard to which fitness we can discern hereditary influence, that of chronic inflammation, and of

what we must be content to express as lowered vitality. How common it is for an attack of pneumonia, which there is no reason to suppose was tuberculous at the outset, to be succeeded by caseation, and that by tuberculosis. The hepatisation has provided the fitting soil. Dr. Delépine¹ gives similar illustrations of the value of tissue change in determining tuberculosis. In the course of a case of low pneumonia dependent on pressure on the vagi, bacilli presented themselves in the sputa, which at first were free from them. In a case of hæmorrhagic disease of the lung in a drunkard bacilli were found in the affected regions, and these only, evidently as a superaddition. Thus, with all respect for the bacillus, let us attach some importance to the receptivity or power of resistance of the major organism.

With regard to bacilli in general, we find that these which so recently were the ultimate results of research are now the bases for further advance. There is no finality in Nature or in human curiosity. Outside the micro-organisms is a pathological system which, though we recognise its existence and its importance, we understand but imperfectly. If the present rate of progress is maintained, we must be on the eve of discoveries in the physiology of disease which can scarcely fail to be of transcendent importance. The discoveries of Pasteur, Wooldridge, Hankin, and Sidney Martin take us beyond the micro-organism into a new field of organic chemistry, beyond the bacterium to its products.

The discoveries of Wooldridge and Hankin with regard to the chemical products of the anthrax bacillus open a vista to new fields of view, while they show much that is old in a new light. The anthrax bacillus has been shown to engender a substance of the nature of an albumose, which is supposed to be fatal to the bacillus itself, while upon the affected animal it has a duplex action; in large doses it produces the symptoms of the disease, in small doses it confers immunity from it. The study of the bacillus has given us antiseptic surgery; the study of its products may lead to we know not what in medicine, whether preventive or curative. Old truths grow and new ones gather round them. Jenner's vaccination may prove but the prelude to many similar modes of prevention. Immunity from anthrax and from hydrophobia can be brought about by the introduction of a harmless dose of a poison which in large quantity or a more active form is deadly. Why should not tuberculosis be prevented in a similar manner? The prevention of tubercle would seem to be more feasible than the curing of it; but I will not enter upon a subject which is sure to be fully dealt with elsewhere.

In the fact—if it prove so—that the bacillus is killed by its own products we might see something hopeful, were it not that these products, if sufficiently active and abundant to do so, are likewise noxious to the host. The evil bringing its own cure is the realisation of the old superstition, according to which a viper's bite is cured by its fat, and virtue found in the hair of the dog that bit you. It may, indeed, be thought that the life-products of every organism are injurious to itself. The atmosphere which man creates around him is fatal to him; a fish poisons its own element; and even plants render their soil unfit for their maintenance, not only by exhaustion, but, as some have thought, by excretion. The rotation of crops has been thought to have some such warrant. But when we come to the preventive agency of bacterial products, we come to what is less easy to understand. Smallpox and scarlatina smite once and smite no more. The old idea of something in the blood on which the disease flourished, which was used up by the first attack, does not explain why an anthrax product prevents anthrax, for it does so without any such development of the disease as could be supposed to exhaust its pabulum. Provisionally we are driven to the experience of toleration from use, which is as old as Mithridates, and of which there are many ancient and modern instances, among which may be mentioned alcohol, opium, and more especially tobacco. Custom doth make it a property of easiness. A small dose would seem to produce a tolerance which only a very large dose can overcome.

The influence of pathology, that is, of the habitual consideration of the nature and results of disease, has been hitherto to confer that most extensive of all knowledge—a knowledge of what we cannot do. A study of the results of disease and

¹ An Opinion on Dr. Koch's Treatment of Tuberculosis, BRITISH MEDICAL JOURNAL, November 22nd, 1890.

of its natural laws is a continual warning against the superficial fussiness of the shallow practitioner, who claps on here a poultice and there a blister, and somewhere else rubs in an embrocation assiduously, with a greater faith in the penetrating effects of such applications than knowledge of the profound nature of disease. Pathology teaches humility. But it does something if it teaches the physician that his place is often that of the judicious bottle-holder. He takes no part in the fight, but he supports the combatant in whom he is interested. If he cannot cure the disease he does something if he prevents the patient dying of it.

Such is the present position; but who can say what is before us? Pathological discoveries which revolutionise our knowledge of the nature of disease are not likely long to remain without practical results in the cure or prevention of it. In the conflict between man and the bacterium, between the highest of animals and the lowest of vegetables, it must be allowed that so far the vegetable has the best of it; but the animal though the more vulnerable is the more inventive, and it may happen in the future as it has in the past that science will prevail against numbers. Bacteriology is in its infancy, but it is gigantic, at least in possibility. To isolate the organic germs of tubercle, leprosy, and other diseases which have similar pathological associations may be but the first steps towards results which may prove to be of importance to humanity beyond all politics, beyond all conquest, beyond all the appliances which minister to ease, comfort, and luxury.

Before I quit these great subjects, the anatomy and physiology of disease, I must glance at an aspect of them which can never be better presented than to a meeting like this gathered from all parts of the kingdom. I refer to what may be called the geography of pathology, the effects of climatic and other local influences in promoting and preventing morbid processes. The therapeutical effects of climate are beyond our proper scope, but nevertheless it is impossible to avoid some inferences which spring directly from its pathological effects. The Father of Medicine wrote a treatise on "Airs, Waters, and Places," but there is still much to be learned. Of local influences, though we know comparatively little, yet we know enough to suggest that of the means under our command of modifying chronic disease change of place is the most important. To treat by change of place is to invoke the great laws of Nature which act without ceasing and upon the whole body, and are the ever-present regulators of all life and growth. To see as much of this as we can we must look from two points of view, not only at what locality prevents but at what it produces. To know that there is little stone in Ireland and much in Norfolk, little in the western counties, much in the eastern; that while in England it is most frequent in the colder parts, it is so prevalent in India that lithotomy has long been a native accomplishment; to discern the laws which underlie these facts, as we can partially do, cannot fail to throw light on the origin of the disease and help in its prevention.

The frequency and severity of diabetes in some parts of India and Ceylon cannot but suggest the influence of an opposite climate in its amelioration. I am told that among the meat-eating Parsees of India both diabetes and gout present a frequency which transcends anything of which we have experience in this country. If the climate of India promotes these conditions, what will be the effect upon them of that of the north of Europe or of America? If scorbutic affections are invited by cold, presumably by way of tissue waste and oxidation, what will be the result of the same agency upon the uric acid diathesis, gout, and the disorders in which oxidation is wanting? It might be better to shudder in the frigid zone than to suffer arthritic tyranny in the temperate.

The infrequency of the granular kidney as originating in subtropical districts has already had its influence in the treatment of the disease. Short of such great changes as between zone and zone, even within the limits of these islands, more may be in our power than has yet been recognised. Between the Scilly Islands and Aberdeen are many varieties of hot and cold and moist and dry, many differences of water and of altitude. There is much phthisis in Scilly under warmth and moisture. Is this due to race, to intermarriage—as has been thought—or to location? Where within these

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