all over his face. The *iodides* were omitted; and he went out much better in all respects, but not cured.

CASE III. R. Foulkes, aged 48, a miner, came into the Infirmary on August 21st, having for six months laboured under bronchitis, diseased heart, œdema of the legs, etc. The urine was very red, from the quantity of blood which it contained. It was, of course, coagulable by heat and nitric acid; specific gravity 1015. Blood-corpuscles and epithelial casts of the uriniferous tubes were seen under the microscope. The expectoration was very peculiar and very profuse. In October, I thought I detected urea in it.

When the disease had become chronic (November 19th), I ordered iodide of potassium twice a day, which he took till November 30th. His eyes were at this time much inflamed. and his face was broken out all over. The pustules on his face and upper parts of his body were so large and numerous, that I believe more than one passer-by fancied we had small-pox in the ward. He died December 7th.

Iodine was easily discovered in the urine of this man at the time the eruption was out, but, I thought, in much less quantity (judging from the amount of blue colour with starch) than in the urine of another man, S. Shakeshaft, who took five grains of iodide of potassium twenty days without any eruptive effect; *his kidneys and liver being at the time in a state of activity.*

REMARKS. I do not recollect ever to have seen it stated that a pustular eruption is one of the effects of iodine taken internally. I have, therefore, thought it worth while to place these three cases on record. My friend Mr. Arrowsmith, to whom I mentioned the circumstance, said he had seen such an effect, and even where there was no dropsy. No doubt, this might occur. Professor Lehmann "found that, when several persons had each taken a dose of ten grains of iodide of potassium, some would immediately begin to excrete it in their urine, which, after the lapse of twenty-four hours, no longer contained any trace of the iodide." (*Treatise on the Pathology of the Urine*, etc., by J. L. W. Thudichum, M.D., p. 401.) But if the dose were so frequently repeated that the kidneys could not get rid of it as fast as it was introduced into the blood, or if the kidneys were in a diseased or in an inactive state, as in the three cases above recited, then irregular or injurious effects would be produced.

I have repeatedly given the iodides of potassium and mercury, without any such effects, where the kidneys were in a state of integrity. What I have related confirms the observation of Dr. Thudichum, that "one of the principal reasons why iodine and its preparations are borne very well by some, and have injurious effects in others, is the varying length of time required for its removal from the body." (*Opus supra cit.*, p. 401.)

Original Communications.

ON DISEASES OF THE EYE, THEIR MODIFICATIONS FROM CLIMATE, ETC., AS OBSERVED IN INDIA.

By WILLIAM MARTIN, Esq., F.R.C.S., late Superintendent, Calcutta Eye Infirmary, and Professor of Ophthalmic Surgery, Calcutta Medical College.

[*Concluded from page* 42.]

IV. AFFECTIONS OF THE HUMOURS OF THE EYE. 1. *Crystalline Lens.* Cataract has been found very frequently in the practice of the hospital—certainly out of proportion to other classes of disease, but it is difficult to say to what extent this disproportion exists; for certainly patients will come from much longer distances to a metropolitan institution to be cured of cataract, than for any other disease. It is not one which materially affects the health, and incapacitates the patient from undertaking a long journey, and even in remote regions the idea is prevalent among the natives, that cataract may be removed by operation. Still, as I have found a large number come for relief, who are quite unaware of the peculiar and curable nature of the complaint, and as there are many native practitioners of the class, which from time immemorial have professed to operate for cataract, flocking to a large town, I think when we find that each year, out of about 2,500 patients, those who apply for relief having cataracts may be counted by hundreds, we may fairly conclude that cataract is a remarkably common disease among the natives. In the course of four years, I find that I operated upon nearly six hundred cases; but the number of patients affected by the disease upon whom I did not operate, whether that I preferred a palliative treatment, or they showed a disinclination to undergo an operation, was very much greater.

It has been suggested that the cause of the disease, which we thus conclude to be so frequent among the natives of India, and, I presume, of other tropical climates, is to be found in an effort of nature to protect the sensitive retina from the destructive effects of a blazing sun and intense heat. The objections which most naturally occur to this view, are, that after all, a very small part of the population are the subjects of cataract, even of those who arrive at an advanced period of life; the remainder, then, must be unprotected, and there is no evidence to show that the subjects of cataract have retinæ more sensitive or delicate than others; then, I have no reason for thinking that nature steps in to protect the European by producing cataract. The adoption of this view would necessitate our concluding that opacity of the lens was the normal state in a tropical climate; whereas all experience and analogy teach us that it is of the utmost consequence that it, like the other refractive media of the eye, should be transparent. This supposition, therefore, may be dismissed as one which will not bear application of the test of common sense.

I have in a few cases among natives been able to trace cataract to an action which was, if not actually inflammation, very like it; but in by far the great majority of cases its mode of origin is as little to be traced, and its progress as gradual as in the European. We seldom see, even in the aged, cataracts as hard and highly coloured. They are often quite soft, occasionally fluid, but most are of a mixed consistence; that is, have the appearance and consistence of a rather solid gelatinous substance. They are more soluble than the cataracts in the European. This is, I think, the deduction fairly made from an examination of the success of the operations for solution and depression in India as compared with Europe. By far the great majority of cataracts have always been operated upon by these methods in the Calcutta Eye Infirmary, as well as by the native operators from time immemorial, and I think the result will show that the disadvantages which have been considered applicable to these operations in Europe, viz., the danger arising from our leaving the lens to act as a foreign body, and to cause irritation and lead frequently to destructive inflammation of the eye, do not apply to these operations, when practised among the natives. The statistics of the Eye Infirmary, as given in my *Report for Four Years of Operations*, show an amount of success, which will scarcely be surpassed in European institutions.

The amount of success which has resulted from operations which have for their object the carrying the lens out of the axis of vision, and, if possible, causing its absorption, has rendered it unnecessary to have recourse, except in comparatively few cases, to operations for removal by extraction; and this is fortunate, for this method is not in general suitable to the native. In the first place, it is an operation difficult to carry out, in consequence of the peculiar physical conformation of the globe and parts surrounding it. The eye is small, deep set, the brow is generally very prominent, and the lens is large in proportion to the cornea and other parts of the eye. In the second place, a large section of the cornea is apt not to undergo the favourable process of union; the cause seems to be a certain defect in the vital power, from which wounds of parts, which are not highly endowed with vascularity, do not readily heal; and on this point we find a remarkable distinction between the European and native constitution. Wounds of what I may call by comparison non-vascular parts, heal well with the former—badly with the latter; on the other hand, wounds of the vascular and sensitive parts do not heal well with the European, but are remarkably apt to heal with the native. There is as often a deficiency of reparative action in the native, as an excess of action with the European; and on this point depends the want of success with the healing of large wounds of the cornea. Having tried the effect of avoiding all depletion and giving unusually good nourishment, and even stimulating after operation for extraction, I have found that the success has been somewhat greater than formerly, when the patient was kept rather low, but when everything apparently was in the highest degree favourable for healing of the section; viz., a clean section large enough to allow a solid lens to pass easily, but not too large, its edges lying smoothly together; a good state of constitution; no amount of restlessness or

pain, etc., I have so often been disappointed at the result from want of union of the section, that I have found every reason to adhere to the opinion contained by almost all ophthalmic surgeons who have practised in India, that extraction is not a method of operation which is applicable in the great majority of cases of cataract among the natives of India, and particularly the natives of Bengal; the conformation of whose eye and appendages is farther removed from the European conformation than is that of the native of the North West Provinces of India. The same remarks are applicable to a certain extent, to the subject of extraction in the European in India. The danger, however, lies, in these cases, not in a want of reparative action, but in an excess of it: a severe and intractable inflammation is apt to come on, and often its effects are disastrous in the extreme. The greatest care is requisite in choosing the season, providing for sufficient accommodation, good ventilation, etc. Should the patient suffering from a hard cataract have lived a hard or irregular life, or in any way suffered from the effect of the climate, it will be a question whether the operation is admissible: again, the same patient will not be likely to do well even with operations for depression or solution; therefore, in a large majority of cases with which we meet, the prognosis is not encouraging. Congenital cataract, as may be supposed, among a population so subject to the complaint, is often met with, although it is seldom recognised by the patients' relatives for several years after birth, unless it should exist in a very marked degree. I am not aware that it differs materially in its character, the treatment required, etc., from the same disease in Europe. I have always found the native infant or child very amenable to treatment, and we may almost always anticipate success to our attempts to restore vision in these cases with confidence. With regard to opacity of the capsule of the lens, I certainly have rarely met with cases in which there was the density and toughness which we so often see in Europe. It is as often found opaque in congenital cataract as in Europe; and with reference to the long mooted point, whether the capsule is capable of absorption or not, I think that I may safely affirm, after having observed a large number of cases, that, if cut into small fragments, and allowed to lie either in the anterior or posterior chamber, these will often create no irritation, and will disappear; and this I have seen to take place so rapidly and completely, when the fragments have been in the anterior chamber, that I think it is fair to conclude, that the opaque capsule is capable of absorption.

It does not appear, that the lens, if unabsorbed and enclosed in its capsule, if displaced, will undergo absorption. I have seen many cases of this, in which, after many years displacement, no irritation was caused by the mass remaining in the chambers, even although it was moveable, and no attempt had been made by Nature to cause diminution by absorption.

V. AFFECTIONS OF THE NERVOUS APPARATUS OF THE EYE. Disease of the nerves of motion and ordinary sensation, as it depends upon ordinary exciting causes, as wounds, the sympathetic action with the nerves of the organic system, etc., does not materially differ from diseases of the same parts with the European. Diseases of the portio dura, third, fourth, and sixth nerves, exist separately and conjointly, giving rise, particularly when in conjunction with disease of the optic nerve and sympathetic system, to paralytic and spasmodic affections of the appendages, to strabismus, diplopia, hemiopia, mydriasis, etc.; and these I have found as amenable to treatment, and not more common than in Europe.

1. *Amaurosis.* This is certainly a very common affection with the natives, whether from a comparatively low state of vital power, or from what reason, it is difficult to say; but it is equally certain that a large proportion of cases involving a paralysed condition of the retina are of the functional or curable kind. They are generally combined with a state of general debillty or special cachexia. It will be apparent that the ordinary habits and diseases of the people, which all are apt to induce deficiency of power, the vegetable diet, the habit of taking intoxicating drugs, smoking to excess, etc., would lead to diseases which are generally attributed to an arthritic cachexia, all states which come under the head of glaucoma would be likely to prevail. They are thought by many to be on the increase, from the increase of intoxication and vicious indulgences, which is said to be the case in late years; but I do not think that the number is equal to what we see in Europe.

It is generally believvd, and I am inclined to think that it is the case, that sight declines faster in India than in Europe, both with the native and the Europeon. The sun, the heat, etc., by stimulating to excess the nervous and vascular apparatus of light must, judging from analogy, cause a corresponding deficiency of nervous energy; but it has always been a matter of interest and satisfaction to me to find that so many cases of amaurosis have been found to derive substantial benefit from appropriate treatment. The great number are eaused by a state of anæmia, and are benefited by stimulation. The same gratifying results are not to be found in cases of Europeans, who, in addition to the ordinary exciting causes of eye disease, have a predisposition to amaurosis, arising from the local system being prematurely exhausted by excessive local excitement, as the general system too often is, from over-excitement and consequent exhaustien, caused by heat, the sun, the inactive and too often intemperate habits, excess of nutrition, of drinking, of smoking, etc. A larger proportion of the organic or incurable forms of amaurosis are certainly to be found among Europeans in India, than among natives. The varous inflammations of the eye, too, are very apt to take on an arthritic type, and to end in glaucomatous and dropsical affections of the organ. Nyctalopia, or night-blindness, is a form of eye-disease which is almost confined to hot climates: it is attributed to various causes, among which may be enumerated the sunlight, moonlight, want of food, exposure, etc., etc.; but I have found it as prevalent among those of the lower classes who were not exposed to those influences, as among those, sailors and others, who have been said to be remarkably subject to it. I am inclined to believe that it is simply a form of amaurosis, and that it is caused by anything which may produce a state of anæmia or cachexia. I have found more patients discontinue their attendance very soon after having applied for relief for this complaint, than any other class; from which I conclude that the disease is of the functional or curable kind; and that relief, to a certain extent, speedily ensues from appropriate treatment, in a large majority of cases; but in many I have found it an intractable disease, and in some it has been but the prelude to a condition of permanent amaurosis. Cases of true nyctalopia are to be distinguished from those of nyctalopic amaurosis, in which there is a very marked deterioration of sight after the power of the sun is gone, joined to defective sight with bright light; whereas, in nyctalopia, the change is from fair or good sight to almost total blindness—a change so great and so peculiar as to indicate a very peculiar state of the retina different from what may be found in any of the forms of amaurosis. These remarks are intended to apply only to the natives of India. I do not remember to have seen a case of the disease among Europeans. I believe that cases are met with among them but very rarely.

VI. DISEASES OF THE GLOBE. 1. *Inflammation and Enlargement.* This form of affection is not uncommonly met with, but the destructive sympathetic inflammations propagated from a diseased or injured eye to its fellow, are not common. I have seldom found any sympathetic inflammation which was not capable of being controlled by ordinary treatment.

2. *Tumours.* Small tarsal tumours are common, and by no means intractable. The same may be said to be the case with non-malignant tumours affecting the globe, whether arising from disease or inflammation affecting the intraorbitar cellular tissue, the fibrous capsule, etc., or not; but from their size, the degree in which they cause extrusion of the eye, stretching of the nerves and muscles, etc., it has been often found necessary to extirpate the globe. In my practice, such cases have almost invariably done well, and the patient, often in early childhood, has been restored to health.

3. *Malignant Diseases of the Eye.* I cannot speak confidently with regard to the comparative frequency of these diseases in India. Few cases apply for treatment at our hospitals; but yet we know that there must be very many spread abroad among the population. It is not a class of diseases for which the patient, who is very often a young child, is liable to be carried very long distances for relief, and unfortunately experience shows us, that the want of medical aid in these cases does not in reality shorten life. On one point I can speak with more confidence, and that is, on the nature of the disease; although I have only a small number of cases to form data from, I have never yet met with cases of fungus hæmatodes, and believe that both it and melanosis are exceedingly rare, either among the natives or Europeans; the cases which I have had under my care, or upon which I have operated, have been either scirrhus or epithelial cancer. In the cases in which I have operated, it has not been so much for the purpose of eradicating the disease (although as I was not previously certain as to the malignant nature of the disease that was one of the indications of treatment), as for the purpose of relieving the pain and distress caused by the portions of the tumour in the orbit, exercising

pressure upon the walls of the cavity. The comparative frequency of scirrhus in India seems to be in accordance with the observations of the best pathologists, who have asserted, that in tropical climates the tendency of malignant disease is to scirrhus, and in cold climates in a much greater degree to fungus hæmatodes, and other forms of malignant tumours.

24, George Street, Hanover Square, January 1859.

ON DISEASED VESSELS; AND THE VALUE OF THE PULSE AS A SPECIAL SYMPTOM.

By Henry Duncalfe, Esq., M.R.C.S., West Bromwich.

[Read before the Queen's College Medico-Chirurgical Society, Birmingham.]

The chief object of my communication is to draw attention to "special symptoms," diagnostic or nearly so of disease; and the consideration of this subject will enable me to record some cases of diseased arteries, which present points of practical importance.

At the primary investigation of a disease, a group of symptoms are presented to us; sometimes our attention will be drawn by the graphic description of the patient, to the principal evidences; at other times, the indefinite descriptions call at once upon our experience, and observation, to analyze them for ourselves; to dismiss the imaginary ones; to modify such as by increased nervous sensibility are magnified to the patients' own preceptions; to determine such as are directly connected with the organic lesion; so that we can describe the remaining dependent symptoms, which we know must follow in the train more correctly and in better order than our patients could themselves explain. Thus it is that we localise disease, and separate such signs as more properly belong to organs, which in the disturbed mechanism become secondarily involved. We do, in fact, recognise two classes of symptoms—the primary, or diagnostic, and the secondary, or the products of the disease resulting from functional disturbance in cooperating organs. We never lose the importance of minute crepitation in pneumonia, or of pectoriloquy in phthisis, or of double bruit in aneurism; but do we always elicit the full information to be obtained from the pulse, skin, secretions, etc. A very interesting "special symptom" in pericarditis has lately been announced by Dr. Barlow, namely, "restricted action of the diaphragm," and without it, the case quoted by him, in which the pericardium was filled with pus, and so the friction-sound prevented, would not have been diagnosed. Without albumen in the urine, would Dr. Bright have associated dropsy with renal disease? and without anæmia would Addison have directed special attention to diseased suprarenal capsules? While it is advantageous to determine diseases to be, by negatively proving them not to be elsewhat, it is equally necessary, and much more scientific, to arrive at once at the nature of a disease under consideration by the positive signs which that disease exhibits.

I premise my communication by these general remarks, as I intend to allude chiefly to the character of the pulse in connection with the cases about to be related.

Case I. *Aneurism of the Posterior Communicating Artery within the Head.* The subject of this aneurism was a child 13 years of age. Of her history I have but little to say; for, being the child of poor parents, little notice was taken of her complainings, and it was only after an order from the coroner, that I became acquainted with it. The parents seem to have known but little of the child's previous state of health; they allow that at times she had complained of headache, had vomited on two or three occasions, and once had fainted. At the time of her death she complained of her head, staggered across the house floor and died.

On removing the brain, a large effusion of blood covered the base; and carefully tracing the arteries backwards, I came to the aneurism (about an inch and a half in circumference,) of the posterior communicating branch of the left internal carotid, which quite covered and concealed the parts contained within the circle of Willis.

The symptoms which marked the interesting case reported by Dr. afterwards Sir Gilbert Blane, are worth enumerating. His patient was a female 64 years of age, who was suddenly seized with a fit of giddiness and dimness of sight, succeeded by acute pain in the forehead, which remained for some time. The indistinctness of vision continued for six months, after which she was seized at intervals with giddiness, headache, and imperfect vision. She for some time saw objects double, and finally showed signs of mental derangement, became maniacal, and died in five years after the first attack.

On examination, the optic nerves were found smaller than usual, and the symptoms so singular were referrible to bulbs five-eighths of an inch in diameter, filling up the hollow on each side of the sella turcica. These bulbs were dilatations of the carotid arteries, and were filled with laminæ of coagulated blood.

That these symptoms were partly produced by pressure seems evident to me, by analogous symptoms which prevailed in the case of a circumscribed abscess of the brain in a patient of my own, and who having had the abnormal changes in the special senses, as enumerated above, also became maniacal and died. In his case, the pulse was measured, slow, and occasionally intermitting, but otherwise regular.

The chief points of interest in the case of aneurism I have described, are, the young age of the patient, and the probability, that even with an aneurism so large, and lying against a structure so delicate, no very urgent symptoms manifested themselves. But scanty as was the information from the parents, the symptoms would have been enough to have created a strict inquiry, and some distrust as to the healthy state of brain. The value of sick-headache in children cannot be overrated; and changes in the organs of vision, as squinting, amaurosis, unequal contraction, or under contraction or dilatation of the pupil, are amongst the most important special symptoms indicative of cerebral mischief. A proof of the importance of the pulse was afforded me some short time since by a medical friend, a careful observer and investigator of disease. When called in consultation to see a little patient, "it was doubtful," he said, "at first to determine whether the child was suffering from bowel remittent fever, or whether the symptoms were produced by some obscure brain affection; but whilst investigating the case, I kept my finger on the pulse, and after two or three minutes I perceived an intermission; that circumstance guided my diagnosis; brain disease was afterwards manifested by unmistakeable signs, and the child died." I have myself notes of cases where the slow deliberate pulse, occasionally intermitting, but differing from the diseased mitral pulse, in being otherwise regular, has been the chief symptom of commencing cerebral disease; and I would here call to mind the value of the hard, contracted, incompressible pulse of nervous exaltation, as in mania, etc., and the loose, easily compressible, decritus pulse of nervous exhaustion, as in typhus, and the extremity of phthisis, and some other exhausting diseases. How important is the enfeebled circulation, with the quick small pulse, evidenced in the cupping of the fontanelles, as pointed out by Hilton, in infants when reduced by diarrhœa and other diseases, every practitioner can bear witness to!

Case II. *Cirsoid Aneurism.* This case, consisting of an unnatural expansion of the termination of the innominata, and the origin of the common carotid, and subclavian arteries, is an example of disease variously described by authors under the names of *aneurisma racemosum, aneurisma cirsoideum, aneurisma anastomoticum,* and *varix arterialis.* It usually occurs in arteries of the third or fourth order, such as the carotid, temporal, occipital, etc. The subject of the present notice is a lady still living, about 56 years of age, tall, muscular, and well developed, and who, during the greater portion of her life, has enjoyed the most robust health; but within the last two or three years, has been occasionally invalided by pains in the head, giddiness, and dimness of sight. On one occasion she consulted me on account of her inability to articulate distinctly, and from her incapacity to frame an entire sentence. On a second occasion I attended her for numbness of the right upper extremity, and pricking sensations with diminished sensibility in the leg and foot. These attacks were of short duration, and readily yielded to depletory measures. Being in a comfortable position in life, she is indisposed to exercise, prone to corpulency, and fond of good living; and at the time of this illness, February 19th, I was called to arrest bleeding from the nose, which had continued for three or four hours, the blood sometimes flowing in stream. The external application of cold and astringents, together with active purgation sufficed, and there was no return of the hæmorrhage till the 23rd, when I found it necessary to plug the nares with a sponge, saturated with a solution of tannin. Directly both nostrils were closed, the blood was forced up through the lachrymal duct, and flowed *guttatim* from the right eye. Cold applications were applied, the patient was then undressed and removed to bed, the shoulders being well raised. Whilst undressing her, I noticed a pulsating tumour above the clavicle on the right side; and, observing it more minutely, I found it to be a pulsating, vermi-