

starch paste, and of like colour; but one or two were of a browner hue than the rest.

There was no trace of the cyst that had been previously injected; and the part of the tumour which was mistaken for it during life, was a part of the central dense mass without a larger peripheral cyst, projecting immediately against the wall of the abdomen.

The contents of the tumour were examined by Dr. Harley, who found some microscopic pseudo-colloid cells.

The following was the result of the chemical analysis:—

Water	.	.	.	97.27
Organic Solids.	{	Albumen	.	.
	{	Meta-albumen	.	.
	{	Casein	.	.
	{	Gelatin?	.	.
Inorganic Solids.	{	Phosphate of magnesia	.	.
	{	Phosphate of lime	.	.
	{	Phosphate of iron	.	.
	{	Chloride of sodium	.	.
	{	Chloride of potassium	.	.
				100.00

REMARKS. The interesting case, of which the notes are given above, was one of the unsuccessful operations to which we called attention in a recent number. The other, which was under Mr. G. B. Childs's care, will be found published in the *Medical Circular* for December 8th. In the instance before us, the fatal result appears to have been due (besides the formidable nature of the operation) to the impossibility of drawing the tied extremity of the pedicle up to the outside of the wound, and it shows most clearly the disastrous results of such a focus of abscess and peritoneal inflammation within the abdomen. All recent experience seems to point to the conclusion that these cases in which the pedicle is too short to be drawn out of the belly, are those in which the operation promises least success, and the ingenuity of those surgeons who occupy themselves more especially with this department of operative surgery is busy in contriving means for meeting this difficulty. Thus Mr. Jonathan Hutchinson showed us the other day an invention by which a whipcord ligature was to be drawn tight through the pedicle, so as to raise the end of the latter by gradual traction as much as possible into the wound; his idea being, that if after all it was found impossible to draw it external to or into the incision, the ligature might be dragged through the pedicle next day, when all chance of hæmorrhage would have passed away. Another interesting point in the case is the effect of iodine injection, which seems to have been satisfactory as far as the obliteration of the single cyst which was then discovered. The unfortunate obscurity which attends the diagnosis of these cases is strongly shown by the fact that the same disease was present, in a latent form, in the opposite ovary, and that therefore the present operation, if successful, would only have suspended the progress of the disease.

#### KING'S COLLEGE HOSPITAL.

##### CASE OF OBLIQUE INGUINAL HERNIA IN A WOMAN.

Under the care of R. PARTRIDGE, Esq.

[Reported by J. WALTERS, Esq., House-Surgeon.]

Mrs. S., aged 54, was admitted on November 7th. On the previous day, during a fit of coughing, a swelling became apparent in the situation of the inguinal canal on the left side. She stated that she had never before suffered from rupture. The bowels had not been open since the 5th; and after the swelling came down, she suffered from vomiting and pains in the abdomen.

On the morning of November 7th, she was seen by a surgeon, who immediately detected a rupture, and returned it without much difficulty.

The pain in the abdomen, vomiting and constipation continuing, in the evening she applied to the hospital. On admission, she complained of slight general pain over the abdomen when pressure was made; she vomited every two or three hours, a quantity of dark stercoraceous matter. On examining the abdomen, a small swelling, resembling an enlarged gland, was discovered over the external abdominal ring on the left side. An enema of castor-oil and gruel, and a large dose of opium, were administered.

November 8th. The symptoms of strangulation still continuing, Mr. Partridge was sent for. Chloroform was administered, and an incision made over the swelling situated over the

external abdominal ring. The integuments were carefully divided, and then something resembling the sac of a hernia was come upon. This was opened, and found to contain some fat like omentum. This was partly returned, and the rest cut off. The finger was then passed apparently along the inguinal canal, through the internal ring, but no protrusion of the bowel could be detected. The wound was then closed, and the patient removed to bed. Opium was freely administered, and large injections of warm water were thrown up into the bowel by means of a long elastic tube, without bringing away any feculent matter. The abdomen remained somewhat tender to the touch, but was not particularly tympanitic. There was no marked tenderness at any particular spot. After the operation, the patient suffered from constant vomiting, the bowels remaining obstinately constipated.

She died on November 11th, apparently of exhaustion.

POST MORTEM EXAMINATION. On dissecting downwards from the surface, a mass of fat, appearing very like omentum, and corresponding to that observed during the operation, was found at the external ring and occluded it. More deeply, however, no connection could be traced between the mass and the omentum. It extended but a very short distance through the inguinal canal, and no scar or other indication of a former sac could anywhere be discovered. What strengthens the view that the mass was not omentum is, that a similar piece was observed in the opposite side of the body, also occupying the external ring. Both these pieces were formed of subperitoneal fat, as follows. The inguinal canal was much distended and lined by a fibrous membrane, forming a false sac. This membrane consisted, for the most part, of transversalis fascia, which had been left behind when the sac was returned, and, perhaps, since become thickened by inflammation. The subperitoneal fat, everywhere very abundant, descended in front of the hernia, and was left as a mass at the external ring. The false sac was that which was seen at the operation, and in appearance closely resembled the outer surface of a true sac. At the internal ring a loop of intestine, two inches in length, was found tightly girt by the neck of the sac, strengthened by transversalis fascia. The ring was large enough to admit the forefinger. The exact position of the hernia was between the peritoneum and the muscles, external to the ring. Thus, in attempting to reduce the rupture, the gut and sac had been pushed aside, separating the peritoneum from the abdominal wall, but not relieving the stricture. There were few evidences of recent inflammation, only a little soft lymph close to the internal ring. The strangulated gut was congested, dark, but firm, not gangrenous. On the opposite side of the body, two hernias were found, one inguinal, the other femoral; these contained no gut, and their sacs were large and loose.

## 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.

It is to be expected that diseases of the eye, like those of other parts of the body, although to a certain extent invariable, considered with relations to their causes, predisposing, exciting, and proximate, will be found to be variable, in different climates considered with relation to the form of disease, the kind and degree of inflammation, the prognosis that may be pronounced, the effects of the disease upon the organ affected, and upon the constitution.

There are several circumstances incident to a tropical climate which will give rise to the modifications alluded to; the principal of these are the excessive heat, the glare of the sun, the excessive amount of dryness or of moisture of the air, according to the season of the year; and it must be borne in mind, that we have in such a climate a very large variety of every condition of the atmosphere, except that the cold is never positively excessive. Relatively, it undoubtedly is; and the relation between the amount of cold and heat at certain times, as, for instance, during the day and during the night, varies

much according to the particular circumstances of each region. When the soil is of a dry, sandy nature, and there is little vegetation, there will be much variation of temperature between the day and the night, the chief cause of this being the rapid evaporation from the surface of the earth. On the other hand, where the soil is of a moist alluvial nature, and the vegetation luxuriant, there will be frequently a cloudy atmosphere, in accordance with the law which regulates the formation of dew; consequently the evaporation will be but slight, and there will be but little difference between the temperature of the day and the night. Exemplifications of this difference may be seen in the climate of the North West Provinces and Bengal. In the former, the alternations being great, particularly in the cold season, where the sun is unclouded and powerful, diseases in general, and, as a matter of course, eye diseases, may be expected to be, and experience confirms this expectation, more acute than in the latter. The cold weather in the north west lasts five months at least, and this is in contrast to the cold weather in Bengal, which can only be said to last about three months, and to be quite a different season from that in the north west. It may, however, be more healthy, *i.e.*, there is less to excite acute disease, although the season has not the invigorating effect upon the European constitution that the north west winter has. At the same time, it seems to agree best with the constitution of the native; for even the more hardy denizen of the north west, like the Bengalee, cannot easily endure the vicissitudes of temperature.

Next in importance to the temperature and the amount and degree of its alternations, is the constitution of the atmosphere as regards humidity. The excessive humidity of Bengal no doubt predisposes to those eye diseases which arise from debility and cachexia, such as amaurosis, glaucoma, arthritic ophthalmia, etc., while the equally excessive dryness and tenuity of the atmosphere in the north west, the amount of dust floating in it, the emanations from numerous substances, animal, vegetable, and mineral, give rise to and keep up the more acute inflammations, particularly those of the conjunctiva, cornea, and parts most exposed to such influences—the great distinction being, that in the north west there is a tendency to the sthenic, in Bengal to the asthenic diseases of the eye.

There will be found corresponding differences between the diseases of Europeans, as found in Europe and as found in India; and again, between the same diseases, as exhibited in Europeans and in natives.

Having premised these considerations, with reference to the differences between the tendencies to distinct classes of disease, as found among the inhabitants of India, European and native, according to the part of the country they are in, the nature of the season, etc., I shall proceed to state what modifications seem to me to be traceable to peculiarities of climate, taking each principal class of eye disease *seriatim*.

I. INJURIES AND WOUNDS OF THE PARTS ABOUT THE ORBIT. Little need be said on this head; certain injuries will produce results almost identical, but the effects will be modified to a certain degree, according to the kind of nervous temperament each class possesses. The European in India is for the most part in a state of exaggerated nervous sensibility, and the native of India in a state precisely the reverse. The native will be found to be, in general, more phlegmatic or apathetic in disposition; the European more sanguine, and in India, from the effects of heat, an indolent life, etc., still more nervous and excitable. Hence we find that the European's power of bearing up against injuries is not in proportion to his power of recovery from diseases of debility. The native will outlive wounds, particularly those of the head, which would cause the death from cerebral excitement of the European. The comparative immunity from cerebral irritation, arising from whatever cause, injury, or idiopathic disease, in the native of India is even more remarkable than the predisposition to the same class of diseases among the Europeans.

II. DISEASES OF THE LACRYMAL APPARATUS. Diseases of the parts which secrete the tears are rare in India; those of the excreting lacrymal organs are not unfrequent, and, according to my experience, the most troublesome are generally induced by neglected acute inflammation of the sac, or what is far more common, of the soft parts over and around the sac; but there is little of those affections of the sac and appendages, contractions of the canals, etc., irritable mucous membranes, etc., which arise from and are kept up by an irritable state of constitution, and are so obstinate in Europe, particularly in wet and cold seasons of winter and spring, and in strumous and cachectic habits. The native is by no means prone to this form of disease, and the European in India less than in

Europe, and this is owing to the greater amount of heat, the relief experienced by mucous membranes in general from the functions of the skin being called specially into action.

III. DISEASES OF THE APPENDAGES OF THE EYE. These do not differ materially from them as observed in Europe: entropion from relaxation of integuments, and trichiasis, are common; phlegmonous inflammations of lids, erysipelas, etc., are not common; syphilitic ulcerations, eruptions, etc., are by no means common, in accordance with what we see to be the case, that syphilis is of a mild character in India, particularly among the natives. Of cancerous and other malignant affections of these parts I shall treat hereafter. *Nævi materni*, aneurism by anastomosis, etc., are rarely seen among the natives, and where they exist, the veins and not the arteries are in fault.

IV. DISEASES OF THE EXTERNAL TUNICS. 1. *Conjunctiva*. I have not observed any material difference between diseases of this membrane as observed in India and Europe, as regards frequency; but the causes are in general different, being connected with extreme elevation of temperature, and the influence of the direct rays of the sun, instead of the frequent combination of coldness and moisture. Granular conjunctiva is neither so frequent nor so intractable among the natives, but is quite as troublesome among the Europeans and Eurasians, or coloured population, as in Europe. The muco-purulent ophthalmia do not show any material modifications, but, as has been observed, are to be traced rather to the influence of heat than of cold or moisture. In my opinion they generally require local depletion, and bear the plan of local stimulation, which is so much in vogue in catarrhal inflammations, even worse than in Europe. The peculiarities of strumous ophthalmia, whether affecting primarily the conjunctiva or cornea, are not so well marked in the native constitution. It is, according to my experience, rare to observe the strumous countenance, such as we see it so often in ophthalmic hospitals in Europe: the bleared eye, the swollen and inflamed Schneiderian membrane, the tumid upper lip, the complications of enlargement or ulceration of the glands of the neck, etc., etc., and the corresponding inflammations are less intractable. The constitution of the European in childhood or in youth seems to be better able to resist the tendency to the various forms of scrofulous disease in India; this is undoubtedly the case with reference to the formation of tubercular deposits in the lungs and elsewhere, and we may anticipate what we find to be the case, that strumous inflammations are more tractable in the eye; but where a strumous tendency has been brought into action by an exciting cause which is also connected with debilitating disease, as variola, measles, etc, the consequent ophthalmia are often as intractable, both among natives and Europeans in India as in Europe.

2. *Sclerotica*. Pure scleritis is very rare among the natives; but I have occasionally seen the form, which exhibits detached patches of inflammation, and which have existed independently of any inflammation of conjunctiva or cornea, with no red zone round the margin of the cornea, etc. Rheumatic affections are by no means rare, but they are attended by a lower form of inflammation in India. Where the sclerotic is materially affected it is in combination with disease of the iris and cornea.

3. *Cornea*. Corneitis, acute and subacute or chronic, is common among the natives, as a form of inflammation brought on by ordinary exciting causes, as much as it is in Europe, and its characteristic arrangement of vessels is well marked. Ulcers of cornea are often attended by a low form of inflammation, and are intractable, particularly where they co-exist with any special cachexia, that arising from small pox, syphilis, etc., more so than in Europe. Wounds of the cornea, if large, do not heal so readily with the native; this is exemplified in the comparative want of success in operations involving the wounding or section of any considerable portion of the cornea, as in the operation for extraction of the lens.

3. *Iris*. Affections of the iris are very common, both among natives and Europeans. A slow insidious form of iritis, with no marked symptoms, except those of gradual loss of sight, is very frequent; and, by the amount of adhesive deposits thrown out, which obscure the pupil and cover the capsule, vision is, in the large proportion of cases, irremediably injured, where the cases, as too often happens, have been allowed to go on a long time without appropriate treatment. We have also, both among Europeans and natives, a large number of cases of the parenchymatous form of iritis, with prominent deposits variously figured, and tumid iris, etc. These are often seen in cases which owe their origin to some peculiar constitutional disorder, or complication of disorders,



the most marked of which are syphilis, rheumatism, the mercurial action, gonorrhœa; but in none have I been able to discover any well marked collection of symptoms such as some authors have considered to be pathognomonic of the disease, or arising from a peculiar cachexia; viz., in the syphilitic, the pupil tawny and drawn inwards and upwards, cinnamon-coloured deposits, or condylomata, as they are called, etc.: such appearances and collection of external symptoms I have often seen, in various degrees, and mixed up in various proportions; but any or all of these so-called pathognomonic symptoms I have not observed at all, where there was every reason for thinking that syphilis was the predisposing, if not the exciting cause of the disease. And, again, I have seen some of all of them in cases evidently brought on by the ordinary causes of inflammation, and in which I could not trace any syphilitic taint, or special taint of any kind. In the same way I have often recognised an arthritic state of the system, as well as of the eye; but not any peculiar state of the iris, as to colour, mode of distortion, character of deposits, which could be said to exhibit any pathognomonic signs of arthritic iritis. The same with rheumatism. The only apparent exception to this, according to my experience, is that, in the inflammation arising from a gonorrhœal taint, there has been a peculiar diffused deposit covering the greater part of the iris, as if it was plastered over it; but this very same appearance, again, I have seen in cases which seemed to have no other cause but a constitution affected with leucorrhœa; so that I can with confidence add my testimony to that of the many who assert, from their experience, that there are no special objective symptoms which can be considered to be pathognomonic of the forms of iritis which arise in connexion with certain constitutional cachexiæ. As regards the treatment of iritis, with which may be joined that of inflammation of the internal tunics generally, I have found that the same plan, with slight modifications, will answer for the native and the European. The native will bear moderate depletion, the action of mercury, etc., as well as the European; and I have not found that the disease will be cured by any other means but those most in repute. It would be desirable in all cases that the use of mercurial medicines could be dispensed with; but, unfortunately, in the present state of our knowledge, we cannot do so; and I am inclined to think that many of the bad effects which may be attributed to its constitutional action in cold climates, are altogether absent in a tropical climate, both with natives and Europeans. There is not that amount of predisposition to scrofula with the native; and in both races the products of the mercurial action seem to be more speedily eliminated from the system, principally in consequence of the greatly increased function of the skin.

The remarks here made with regard to iritis will apply also to inflammation of the aqueous membrane, choroid, and retina. Aquo-capsulitis is a disease, independent of the cornetitis particularly affecting the posterior epithelium, I have rarely seen, but in conjunction with that, it is by no means uncommon among the natives, and often met with among the Europeans, particularly scrofulous and delicate children.

5. *Choroid.* Congestive and inflammatory affections of the choroid are very often met with among natives, and we are generally called upon to treat the results of disease which has been going on a long time; consequently, in a large majority of cases, the sclerotica has already given way, staphylomatous protrusions have occurred, the globe is disorganised, and the sight is irremediably injured. This complication seldom arises from over-exertion of the organ, but from exposure to the sun and heat, conjoined to deficient nutrition. The retina is not apt to take on acute inflammatory action, probably because the natives are seldom exposed to much intense and concentrated light, as is the case with those Europeans who work at optical instruments, the microscope, minute needle-work, etc., for an inordinate time; but only to rather a large amount of heat and sunlight; to which, however, they have been in great measure accustomed from their infancy. They are subject to subacute and chronic inflammations, the cause being in many cases complicated with want of proper nutrition. A large proportion of these cases, attended with considerable loss of sight, are curable entirely or partially: it would seem that the nervous tunic becomes often paralysed from want of proper nutrition.

I do not consider that the diseases of the internal tunics among Europeans in India present any very marked difference from them, as seen in Europe. The retina, I believe, becomes more often paralysed, not from want of nutrition, but from congestion; and acute internal inflammations are certainly more common. Vision also becomes affected by long residence in India, most probably from the retina becoming exhausted, as

a consequence of long continued over-excitement: but while, in the native, this over-excitement exists to only a slight degree, if even it can be said to be present at all in most cases, and is joined in a large majority of cases to a state of anemia, with the European it is much greater, is persistent, and joined almost always to a state of plethora, general and local. This is owing chiefly to the habits of life of the European, which are too luxurious—an excess of nutrition, a deficiency of occupation for the body and mind: the result is a premature debility; the energy of the nervous system, etc., affecting the retina more than any other part of the eye.

[To be continued.]

## PATHOLOGICAL CONTRIBUTIONS TO MEDICAL JURISPRUDENCE.

By WILLIAM BOYD MUSHET, M.B.Lond., late Resident Physician at St. Marylebone Infirmary.

To the majority of practitioners, few opportunities are presented for the practical pursuit and study of questions connected with medical jurisprudence.

When I was medical officer of St. Marylebone Infirmary, unusual advantages were afforded for the prosecution of inquiries bearing on the subject, but many interesting cases were not chronicled, want of leisure frequently precluding the minute accuracy and detail essential in matters intended for report. The importance of forensic medicine, however, in its scientific and social aspects, induces me to conceive that any instalment to our knowledge will not be altogether unacceptable; and I therefore offer the following cases, although incomplete and unconnected, trusting that they may elicit further contributions, and more earnest and extended cultivation of this department of the profession.

It is to be regretted that medical witnesses, from hasty and illogical conclusions, or expression of contrariety of opinion, are often exposed to animadversion, and even ridicule, in courts of justice.

These occurrences act injuriously, by depreciating us in public estimation, and are only to be obviated by adhering to facts. When in doubt, our doubts should be honestly admitted, being unbiassed by preconception of the case or of the guilt of the prisoner. Possibilities, as well as probabilities, should be well considered, as appearances presumed inconsistent or inexplicable may be in accordance with ordinary physiological or pathological laws.\*

The evidence derived from books may be accepted as a confirmation or corrective; but no authority should be unreservedly subscribed to if opposed to observation or experience, as a number of cases, arising from any given operation—whether accident, violence, poison, or disease—necessarily exhibit diversities in the character and evolution of symptoms, and in the textural alterations revealed by the scalpel.

It would be here out of place to dwell at length upon the propriety and utility of coroners being elected from the ranks of medicine; but these functionaries, when of the legal order, for the most part exercise an obstructive influence in the performing of *post mortem* examinations, which ought almost always to be instituted in sudden, violent, and suspicious deaths,† as, if not immediately demanded for the inquiry at issue, such inspections may prove important indirectly in future cases; and if, by law, a full and faithful record were insisted on from the medical man in every judicial investigation,‡ valuable statistics would be accumulated, and the welfare of society advanced—such an enactment evidently tending to the greater repression of crime.

### I.—DESTITUTION.

J. R., aged 54, was admitted into the Infirmary on the evening of October 3rd, 1856. He was much emaciated, and in a state of great prostration and filth, with brown dry tongue, slight œdema of legs, and unpleasant exhalation from the body; and the evidences of destitution were corroborated by his previous history. He was ordered acetate of ammonia with nitric ether, and arrowroot, wine, beef-tea, and milk.

\* In illustration, I have heard a very eminent hospital physician and lecturer remark, that a gentleman (who afterwards became a professor of pathology) brought a liver some years ago before one of the medical societies, as a sample of melanosis, the margin of which had undergone black discoloration by the action of the abdominal gases after death!

† Had this been observed in the instance of Palmer's brother, subsequent tragedies might have been prevented.

‡ To be furnished to the Registrar-General.