On acute ophthalmia, as it occurred in the left wing of H.M.'s 37th Regt. during 1851-52 / by J.W. Fleming.

ON

ACUTE OPHTHALMIA,

AS IT OCCURRED IN

THE LEFT WING OF H. M.'S 37TH REGT.

DURING

1851-52.

BY

J. W. FLEMING, F. R. C. S.

SURGEON H. M.'S 37TH REGT.

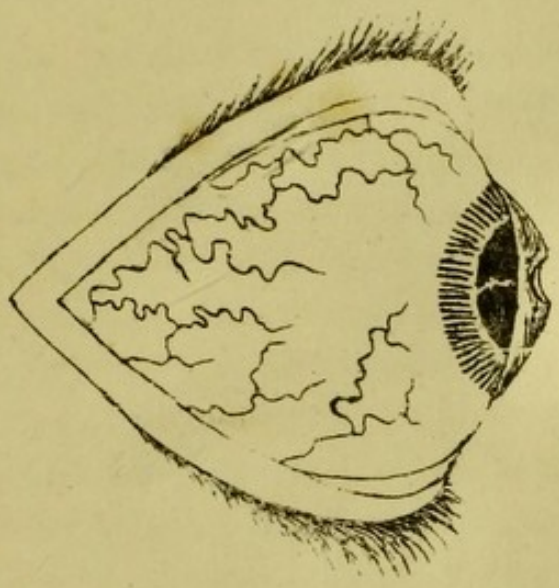
BENARES:

MEDICAL HALL PRESS.

MDCCCLX.

"*Ophthalmia* is, in my estimation, one of the most import-
"ant subjects to which the attention of a Military Surgeon
"can be directed."

BALLINGALL.



The transparent ulcer of the Cornea as viewed sideways.

MORGAN.

OPHTHALMIA ACUTA.

Of this disease which always prevails more or less among soldiers serving in tropical climates,* no less than 76 cases came under treatment. The appearance of this complaint, "than which few have been such a source of "regret to Commanding Officers, and of vexation and "disappointment to Surgeons," in July 1850, after the Regiment had enjoyed an almost total exemption for a number of years, is somewhat remarkable and difficult satisfactorily to account for.†

It is however a cause of much satisfaction that notwithstanding the large number of eyes treated, not one man, with a single exception, left the Hospital with loss or even impairment of vision, nor with a speck upon the cornea; a most gratifying result considering the severity and extent of occasional corneal ulcerations of many of the cases. This success I think may be fairly attributed to the careful consideration of the requirements of each individual case, and the absence of the common routine practice too often followed in the management of this class of diseases, ending generally in disappointment to the Surgeon and misery to the patients.

Notwithstanding my utmost endeavours to trace the origin of this disease, I regret to say no very positive conclusion can be arrived at. There does not appear to be any peculiarity in the constitution, habits or mode of life of the men composing the two companies serving in

* The ratio of admissions in Ceylon, as given in the "Statistical Report," is 70 per 1000 of mean strength, while in the Windward and Leeward Islands diseases of the eyes are nearly five times as common as among troops at home.

† The Regiment embarked for Ceylon in November 1846.

Colombo, sufficient to account for the remarkable susceptibility to ophthalmic inflammation, though the existence of some such predisposing cause is rendered probable by the comparative exemption of the Artillery and H. M.'s 15th, their contemporaries in this place.*

Of these 76 cases, six remained from the preceding year, and in addition to these latter,

15	were admitted in	April.
6	... ...	May.
10	... ...	June.
6	... ...	July.
6	... ...	August.
5	... ...	September.
3	... ...	October.
2	... ...	November.
1	... ...	December.
3	... ...	January.
7	... ...	February.
6	... ...	March.

Of the Admissions

Company	D.	furnished	40 cases.
„	F	... ...	1.
„	G	... ...	31.
„	L	... ...	4.

Except in severity, persistence, or complication, the chief symptoms varied but little in each case. Those most complained of were a feeling as if some foreign body, as a grain of sand, or dust, were in the eye, increased lachrymation, great intolerance of light, and a hot burning sensation when the eyelids were separated, occasional headache, especially at night. The vascular injection was generally found to commence in the pal-

* This immunity was the more remarkable as the disease prevailed to a considerable extent among the native population at the time.

pebral, and gradually extend over the ocular layer of the conjunctiva. The congestion though slight at first, became afterwards so great as to obliterate all trace of the vessels. The most common complication was the occurrence of one, two or more, and for the most part three, small ulcers situated almost always around the edge, or within the upper half of the cornea, and very rarely indeed were these found in the lower half. These are described by Morgan as "healthy ulcers of the cornea, not attended by discoloration nor loss of transparency in the part," and "appearing as transparent spots or depressions frequently only to be seen in a side view." In all the cases where the cure was slow, it arose from the constant fresh appearance of these ulcers almost immediately after the healing of their predecessors. In one case only, that of a highly scrofulous young man, did an ulcer of this description degenerate into what may be called, an unhealthy* sloughing state, which however by appropriate treatment did well and left no trace behind.

The only case of loss of vision occurred in the person of an old worn-out and free living soldier who had previously lost his right eye in the West Indies; when admitted, the symptoms appeared slight, but during the night they had much increased and by the next morning the cornea was found to be in a high state of inflammation, complicated with Iritis. The most active remedial measures failed to make any impression, and unfortunately the cornea gave way the following morning. This patient was eventually sent home as an Invalid.

The difficulty of arriving at a correct conclusion to account for the causes has been already adverted to, but perhaps the following may be considered to have been the chief exciting ones.

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* Chiefly the daily instillation into the eye of pure Cod-Liver-oil.

First.—Exposure to wind, rain, dust, &c., while on sentry at night, or to partial shocks, or draughts and currents of air, while in a state of perspiration, or fast asleep and half uncovered in their Barrack Rooms, from neglect of men, who had occasion to go out at night, to shut the door until their return.

Second.—Alternate exposure to the sultry glare of the noon-day heat and light reflected from the gravelled Esplanades and white-washed Barracks, and the cool atmosphere of morning and evening.

Third.—Inadequate provision for personal ablution; the washing house attached to each Barrack is insufficient, and the supply of Tubs too small, causing the men to use their Tin Canteens, from which they drink their coffee and soup, for wash-hand basins.*

It may perhaps be interesting to state here the various causes the men themselves assign for the production of this affection.

14 to exposure to the night air.
12 to the sun's rays.
5 to sitting in the wind or currents of air.
3 to dust being blown into eyes.
2 to Barrack Room door being left open at night and thus getting cold.
1 to dust from breaking stones.
15 to catching cold.
24 to no particular cause.

Of these patients.

33 first felt the affection at night.
43 ditto ditto during the day.

And

35 while on guard.

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* The Lavatories, particularly of the Hospital, have been greatly improved since the above was written.

1	do.	Parade.
5	do.	in Hospital.
1	do.	on Orderly Room duty.
34	do.	in their Barrack Rooms.

In

31	it first appeared	in the	Right eye.
40		do. do.	Left eye.
5		do. do.	Both eyes.

By referring to the first Table we find the largest number of admissions occurred in April and June, after which there was a gradual decrease, and again an increase during the hot months of the year ; the fewest took plack in the three cool months of October, November, and December.*

There has been no disposition on the part of the men to postpone the reporting of themselves when attacked by disease ; and the Non-Commissioned Officers and Privates have strict injunctions to report immediately any case of sickness or indisposition that may come to their knowledge. Close observation of the various cases enable me to state, with confidence, that I do not entertain the slightest suspicion of the complaint being produced or aggravated by design.

In the treatment of these cases my great object was speedily to reduce the *local* inflammation, at as little expense to the *general* strength as possible. To attain this, lowering, or antiphlogistic, measures were employed merely long enough to subdue the more acute symptoms ; and instead of the " application of a large number of Leeches round the orbit" a constant and regular drain upon the congested vessels, was maintained by the daily application of one, or two, seldom more than three, and

* These two periods correspond with the setting in of the S. W. and N. E. monsoons, and are particularly inimical to health. During the former acute cases increase—gradually decline during the interval—and in October again increase till after December.

generally only one leech, to the inner canthus of the affected eye; if the cornea was free from irritation, a saturated and strained solution of Acetate of Lead was instilled into the eye every night and morning; when small ulcers or specks were present the following Collyrium was substituted.

℞. Gum: Opii gr. iv.
Sulph: Zinci gr. x.
Aquæ Bullient. ℥j. M.

This when cool was also used twice a day; small doses of Rhubarb, Carbonate of Soda and Quinine were administered with the very best effect. Two very obstinate and protracted cases of strumous ulceration of the cornea eventually succumbed to a course of Iodide of Potassium and Tincture of Iodine, and applied locally in the proportion of two grains of the former and half a grain of Iodine to one ounce of distilled water.

To relieve the intolerance of light, ever a most distressing symptom, the Extract of Belladona was rubbed around the orbit, and always afforded perfect relief, attributable probably to the sedative influence on the retina possessed by this substance.

Mercury was given only in two cases of Iritis, and one of severe Corneitis, and of course with the usual marked effect on the inflammatory symptoms.

Each man was supplied with a separate Basin and had his own towel; all were given to understand that on the assiduity with which the warm water fomentations were used depended the shortness or protraction of the cure, and the consequence was, that nearly the whole day was occupied in applying this valuable adjuvant, and with corresponding advantage over the disease and comfort to the patient.

The bowels were regulated by occasional doses of Infusion of Senna with Sulphate of Magnesia and Quinine.

All Evacuants, Emetics, indiscriminate use of Mercurials, violent purgatives, general bleedings, blisters, setons, irritating ointments and such like "heroics" were avoided with what result the cases best show.

As soon as the more acute symptoms subsided, which generally took place in two or three days, the spoon diet was changed to low, and if this agreed, to half; the men, with one exception, were not confined to bed, nor yet to the ward, but exposure to moderate light and the cool refreshing air, with gentle exercise during the mornings and evenings, was permitted, and with the increased diet, &c., certainly did more good than "Black draughts, leeches and green shades" could have done.

When the patients, from long confinement or otherwise, became weak or appetite failed; and when the conjunctival membrance shewed a disposition to assume a soft, velvety and relaxed condition, Solution of Quina, or the Muriated Tincture of Iron, was administered twice a day. I have not met with a single instance of what is termed "granular conjunctivitis."

During the period referred to, the extreme range of the

	Thermometer	and	*Barometer*
In April, was	67° to 86°	„	29·35 to 30·29
„ May, „	80° to 83°	„	29·95 to 30·02
„ June, „	78° to 82°	„	30· 2 to 30·28
„ July, „	78° to 81°	„	30·01 to 30·28
„ August, „	79° to 80°	„	30· 2 to 30·29
„ September „	78° to 81°50″	„	30· 3 to 30·29
„ October, „	78°50″ to 82°	„	30· 2 to 30·31
„ November, „	78° to 82°50″	„	30· 2 to 30·33
„ December „	77° to 81°	„	30· 3 to 30·35
„ January, „	77° to 84°	„	29·30 to 29·85
„ February, „	78° to 86°	„	29·30 to 29·85
„ March, „	81°50″ to 88°50″	„	29·30 to 29·85

The average Annual fall of Rain at Colombo is about 72 inches.

NOTES

OF

TWO INTERESTING CASES

OF

PULMONIC AND CARDIAC

DISEASE.

BENARES:

MEDICAL HALL PRESS.

MDCCCLX.

The following cases were met with in the Hospital of H. M. 37th Regiment, and present features of such peculiar and striking interest as to be considered well worthy of record. The first illustrates the symptoms pathognomonic of cases of Pleuro-Pulmonary fistulæ; and the second is equally interesting, as giving an account of a disease, apparently of very rare appearance.

Both cases occurred in the practice of my friend Dr. Alex. Browne, with whom I had the good fortune to be associated during his service in Ceylon.

J. W. FLEMING, F. R. C. S.
Surgeon H. M. 37th Regt.

NOTE I.

Case 1st of Pleuro-Pulmonary Fistula, &c., &c.

Private John R.——Æt. 26. of sanguine temperament, strong and muscular, was admitted on the 3rd of August, 1845, with signs of Phthisis, which underwent little change until the 3rd of September, when he complained of acute pain in the left side of the chest, and dyspnœa; and on the 11th began to expectorate purulent matter, at intervals, in great quantities. About the beginning of October, the left side of the chest was larger than the right, the intercostal spaces were level with the ribs, and the motions of the latter were limited. The sound on percussion was extremely clear over the whole anterior of the chest on the left, even in the precordial region; and became dull laterally along a line about 4 inches outside the nipple, and this dulness changed at the lower part of the chest with a change of position, but was permanent between the base of the scapula and spine. The respiration was inaudible, with the exception of a small spot at the sternal end of the second rib, and the sounds of metallic tinkling and fluctuation on succussion, left no doubt of the presence of air and fluid in the cavity of the pleura. The heart's sounds were faintly audible on the left of the sternum, but distinct and accompanied by a trifling impulse under the cartilages of the ribs, between the right nipple and sternum. Percussion elicited a comparatively dull sound over the anterior and lateral surface on the right side, but the respiration was almost puerile, and accompanied by cavernous râle and pectoriloquy under the

middle of the right clavicle. The Liver was large, and descended to within two inches of the umbilicus.

He usually lay on the back, inclining a little to the left, or altogether on the left side ; and complained of a feeling of suffocation when he turned on the right. The pulse was small and frequent ; seldom under 100, the dyspnœa was constant, though at times greatly increased ; the cough was troublesome, especially in the mornings, and he often expectorated a pint, or more, of purulent matter in a very short time, when the flow would suddenly cease, to recur after an interval, but particularly in the morning, or after sleep. He continued in this state for several weeks, the disease making little progress in the right lung, but the emaciation and debility gradually advanced, small bed sores formed on the sacrum and left trochanter, and at length diarrhœa supervened and carried him off on the 25th January.

Autopsy,—30 hours after death. Beyond a certain degree of emaciation and evident enlargement of the left side of chest, the external appearances presented nothing remarkable. The *head* was not examined. *Thorax* :—The right lung adhered pretty firmly to the parietes near the apex, and two small cavities were found at this point ; and there were numerous crude tubercles dispersed through its substance, even to the lower margin. On opening the left pleura the air issued with a hissing noise, and the side plainly collapsed. The pleura was coated by a soft false membrane, that bound down the lung, which was compressed to a very small bulk, against the ends of the ribs and spine, and its sac contained about two pints of purulent matter, which did not fill one fourth of the cavity. On the anterior aspect of the upper lobe of this lung, near the interlobular fissure, two circular openings, the size of a small quill, were observed, which led into

an irregular cavity, and this again opened into a branch of the upper bronchial division. The substance of the lung was solid, void of air, and contained a number of crude tubercles more or less advanced. The Heart was thrust entirely to the right of the mesial line, and on opening the pericardium, the left side of this organ presented a perpendicular plane surface, of which the interventricular septum formed the anterior margin; the left ventricle being completely flattened and pushed under the right, so as to give the heart a triangular wedge-like shape, which it retained when placed on the table. The posterior half of the mitral valve was a little corrugated on the line of its centre, apparently from the pressure; but the heart, though small, appeared perfectly healthy, the only change being in that of its shape. *Abdomen* :—The Liver weighed 5 lbs. 10 oz. and the upper surface of the left lobe was flattened and pushed obliquely downwards, and to the right. The lesions of the intestinal canal were unimportant, and such as are usually found in Phthisis. The other viscera appeared to be normal.

Remarks :—This case illustrates in a remarkable manner a symptom perfectly pathognomonic of cases of Pleuro-pulmonary fistulœ, namely, the expectoration at intervals of purulent matter in very large quantities, in an incredibly short space of time. It also shews the effects of pressure, by means of air, in changing the position and shape of important viscera. The explanation of the first phenomenon appears to be simply this, that during sleep,—for it took place chiefly in the morning—the purulent secretion, going on in the sac of the pleura, rises above the level of the fistulous openings in the lungs, and when the patient awakes his exertions in coughing, to clear away mucus, or other matters accumulated in the air passages, give rise to strong inspiratory efforts, that of necessity introduces an extra

quantity of air into the cavity of the pleura, which, rising through the fluid, cannot escape by the same route, and is consequently condensed, until its elastic pressure forces the purulent matter through the fistulous track into the air passages, when it is brought up literally in mouthfuls like blood in cases of hœmoptysis.

The changes of shape of the Heart, and Liver were certainly most unusual, and that air was the efficient agent in their production seems self-evident; and as additional proof, it may be stated, that the cavity of the left pleura, at all times, contained more air than liquid, from the early part of October up to the day of his death.

NOTE II.

CASE 2ND.—SINGULAR AFFECTION OF THE HEART, FISTULOUS COMMUNICATION BETWEEN RIGHT AURICLE AND VENTRICLE, AND LEFT VENTRICLE.

THOMAS D.——Æt. 30. An Irish Carman, of short stature, stout and healthy looking,—formerly of rather intemperate habits—was admitted on the 31st May, 1847, with pain and swelling of the left testis attended with pain in the loins, especially on the left side, urine high colored and depositing a reddish sediment. The swelling of the testis and lumbar pain soon abated under treatment, but he became subject to irregular attacks of purging, recurring at intervals, for nearly three weeks.

During this time it was remarked that the pulse in the left wrist was almost wanting, though there was no obvious irregular distribution of the artery, and on examining the chest there was a loud bellows sound accompanying the ventricular systole, most distinct about

the level of the 2nd rib, but he had little or no præcordial oppression, and said that he never had rheumatism. His spirits became depressed and he was subject to irritability of stomach, with occasional returns of purging, but he did not *complain* of dyspnœa or oppression in the prœcordial region until the middle of August, when the face was observed to be puffed and the abdomen tumid. The urine was now clear, copious, of low specific gravity and contained no albumen. The bellows sound continued and was now heard in the arteries on the right side of the neck. He now complained of pain in the left side of the chest and in the back, about the fourth dorsal vertebra, as well as in the left shoulder and side of the neck, he became restless at nights, the infiltration of the areolar tissue rather increased, the irritability of stomach and bowel complaint returned, he lost his appetite and strength, and the oppression about the prœcordial region was greater, the respiration became difficult and much accelerated, the pulse got softer and weaker and the bellows sound was loud under the upper third of sternum. Early in November dysenteric symptoms manifested themselves, the dyspnœa and oppression in the region of the heart greatly increased, and the serous infiltration of the upper and lower extremities became very considerable, and two days before death a loud "bruit de Scie" was heard over the left ventricle. He died on the night chair, having got up without assistance at 8 P. M. on the 9th November.

AUTOPSY,—16 hours after death. Serous infiltration of cellular tissue most considerable in trunk and scrotum, swelling of the face less than during life. Numerous purpuric spots on the anterior part of the Chest and shoulders with large livid blotches on the back and loins. *Head* not examined. *Thorax* :—The upper lobe of the right lung was loosely connected to the parietes

by long dry bands, the concave surface of the lower lobe in contact with the diaphragm, presented a singular radiated white appearance, the opacity of the diverging lines decreasing from a thick central patch, (apparently lymph of long standing), and almost of cartilaginous hardness towards the exterior of the circle where they gradually disappeared. The left lung was more closely adherent over the upper lobe and posteriorly, but was otherwise healthy. The Pericardium contained about 8 oz. of Serum.

The Heart was large, the parietes of both ventricles, especially the left, being slightly hypertrophied, and the cavities a little dilated, the muscular substance was easily broken down under pressure. A soft semitransparent mass about the size of a pea adhered to the base of the left ventricle externally by a pedicle about $\frac{1}{2}$ an inch in length, and there was a small white patch on the left side of this ventricle, the large division of the mitral valve was white, thickened and presented an oval patch of minute warty Excresences $\frac{1}{4}$ of an inch in diameter on its auricular face, with some erosion of the Endocardium in the centre, but the margins of the valve were a little thickened and no regurgitation could have taken place. The aortic valves were thick, rough and irregular on their free margins but capable of closing the orifice, as was proved by opening the vessel and pouring in water. The right half of the internal segment was loosely united to the septum by a few soft fibres, the meshes of which were filled with calcareous matter which had also been deposited in the septum penetrating its whole thickness, and on its disintegration leaving a fistulous communication between the left ventricle and right auricle and ventricle, its opening on this side having destroyed the attachment of the internal section of the tricuspid valve for about $\frac{3}{8}$ of an inch, and the aperture in the left ventricle was nearly the same size.

The fistulous track was rough and uneven, some of the cretaceous particles still adhering to its sides. The other sections of the tricuspid and the pulmonic valves were healthy and there was no hypertrophy of the right auricle. About half an inch beyond the aortic valves, there was a small pouch or depression on the anterior wall of the aorta, with some trifling erosion of the internal coat near its centre, but from this point onwards there was no disease of the artery. No cause whatever could be discovered for the indistinctness of the pulse in the left arm ; the artery was of the normal size.

The *Abdomen* contained about 3 pints of clear serum, the stomach was empty and apparently natural. The small intestine was healthy throughout. The cœcum and upper part of the colon were nearly normal, but the sigmoid flexure and rectum presented numerous points of ulceration, generally small with some diffused redness of the mucous coat in patches, and considerable ramiform injection of all the coats, which was most obvious externally. The Liver was large and of the variety called nutmeg. The Spleen weighed 1 lb. 5 oz. and had contracted adhesions to the parietes and surrounding viscera. The Kidneys were of moderate size, the left being the larger. and both presented a mottled yellow appearance, probably the commencement of granular degeneration at different points. The urinary bladder was contracted and healthy.

Remarks.—Previous to death it was believed that Aneurism existed, as well as disease of the heart chiefly from the extreme weakness of the pulse in the left arm, together with pain in the left side of the neck and shoulder, and the limitation of the *soufflet* to the upper portion of the sternum, because it was impossible to account for the difference of the pulse in the two arms, on any other supposition than that of a tumour compressing the vessels near their origin, for any

disease of the valves, it was imagined, would have an equal influence on the circulation on both sides. The occurrence of a new and harsher sound over the left ventricle, shortly before death, indicated some important change in the disease of the heart; but the extreme agitation and restlessness of the patient precluded any prolonged or careful examination at this period.
