preceding ague, yet it is impossible to doubt that it had originated in this last-named disease. For, unlike most other periodical diseases which ague entails upon the body, this inflammation of the knee had in itself an obvious resemblance to an ague fit. The characters of an ordinary intermittent fever could be recognised in those of the local phenomena; the chill, the heat, and the perspiration of the one disease having their counterparts in the coldness of the foot, the inflammatory action, and the synovial effusion of the other. Sir Henry Holland quotes from Dr. Leonard, of Muhlheim, the case of a woman in whom an attack of influenza passed into a local intermittent, affecting first the left, afterwards the right arm with every successive symptom of regular ague, the rigor, heat, and perspiration being all distinctly marked in each fit. The case differs greatly from my own, however, in the duration of the intervals and attacks. Dr. Leonard described daily fits, while in my own case each attack lasted five days, and the intervals varied from twenty-five days to five or six. By the similarity of the local phenomena his case confirms the conclusion that my own originated in ague; but it suggests no cause for the singular protraction of the periods. May it not be that the disease in his patient was a true ague, whilst the other case exhibits a local affection, originating in simple fatigue, but acquiring from a previously formed constitutional habit, a character unnatural to itself—namely, that of recurrence without a renewal of its exciting cause?

Periodical diseases having a longer interval than that usual in the different forms of ague are very rare, and have not been noticed in our best systematic works. They are, however, not unknown, and the "Transactions" of the Medical Society of London (vol. i., 1817, p. 89,) contain the record of three cases which remove the appearance of singularity from the present report. Dr. Joseph Adams, at that time President of the Society, gave an account of three cases of periodical sickness, in two of which the attack occurred weekly, the patients being women; and in the other, a young gentleman, it happened every ten days. In all the cases the sickness was severe, and lasted several hours, and the disease had continued for years. Dr. Adams conjectured, for he had no proof, that the attacks were connected with ague. He accordingly prescribed the arsenic, and he succeeded in entirely curing two of his three patients. In my own case, though the disease had almost certainly originated in ague, the arsenic failed to afford any relief.

CLINICAL ILLUSTRATIONS

OF

ABDOMINAL ANEURISM.

By JOHN COCKLE, M.D.,

PHYSICIAN TO THE ROYAL FREE HOSPITAL.

THE following cases are brought under notice as strongly confirmatory of the value of a sign of abdominal aneurism frequently mentioned by practical observers, and one, perhaps, at times, the most to be relied on—viz., severe and intermitting pain in the back and loins, often radiating to the front of the abdomen, and, downwards, to the thighs.

Joseph B—, aged thirty-four, a man of spare frame and sallow but not jaundiced complexion (for the conjunctivæ are clear and blue, the pupils equal), by occupation a mariner, was admitted into the Royal Free Hospital under my care Aug. 18th, 1863. His habits had been temperate, and his health generally good, although he had been much in the tropics. In the year 1851 he had had an attack of yellow fever, in Jamaica, from which, however, he recovered, and quite regained his former health, which continued unimpaired until about fourteen months ago, as nearly as he can remember. At this time, without any cause that he can assign, he felt pain in the lower part of the chest, and, in a less degree, in his back. This was followed, in a month or two, by a sensation of beating in the stomach, which, gradually increasing, compelled him to consult Dr. Spiers, who pronounced his complaint to be of aneurismal nature.

When examined after his admission into the hospital, a slight and gently rounded prominence of the abdominal wall was perceived just below the ensiform cartilage, a little to the left of the median line. This prominence, without visible impulse,

was found, when traced, to form part of a tumour nearly as large and as round as a child's head at term. It extended towards the right, about two inches beyond the median line, while upon the left side it was in close contact with the false ribs. The swelling was uniformly smooth, moderately firm, slightly tender upon pressure, and yielded to the hand a forcible and expansible impulse, single, and synchronous with the systole of the heart and radial pulse. No thrill could be felt. A heaving impulse was communicated to the ear by the stethoscope over all that portion of the swelling situated to the left; while over the portion underlying the median line a very abrupt, hoarse, and superficial murmur was audible, coinciding with the systole of the heart. This murmur was far more intense when the patient was placed in the recumbent position. At the corresponding site, posteriorly, neither impulse nor murmur could be detected during this and subsequent examinations. The heart was in its normal position, and its sounds were clear, though feeble. The right hypochondrium was neither tumid nor tender; nor was there effusion into the peritoneal sac or enlargement of the superficial veins. All the functions seemed naturally performed. The urine was natural in colour and quantity, and free from albumen. In short, this man's principal complaints were of recurring pain in the back, extending round to the front of the body and, very exceptionally, downwards to the legs; and of a sense of internal beating. The attacks of pain were comparatively slight during the day; it was at night they occasioned so much distress. Soon after lying down, severe pain in the back and front of the body compelled him either to sit up in bed or to walk about the ward. By this change of posture the pain would gradually subside, to be renewed on lying down. Thus he passed his first night in the hospital.

A full opiate was given every night afterwards before lying down, which signally lessened both the violence of the pains and the frequency of the paroxysms. The patient was kept as quiet as practicable; he was placed upon a dry, nutritious diet, and took small doses of the sesquichloride of iron thrice daily. Cold compresses were, at first, applied over the tumour, and subsequently strips of belladonna plaster. After this treatment had been rigidly carried out for some weeks, marked amendment followed. His sleep was but little disturbed, the sensation of internal beating had greatly subsided, and the tumour had gradually lessened in size, becoming harder and its impulse decidedly less, though still marked upon the application of deep pressure. The character of the murmur remained unchanged. How much of this improvement was to be ascribed to the quiet and regularity of an hospital life may be matter of opinion; the general result, however, was sufficiently satisfactory to enable the man, at his urgent request, to return to his home on Oct. 14th.

On Feb. 23rd, 1864, upwards of four months afterwards, J. B— was re-admitted. He had for a time followed some light occupation, but latterly the recumbent position had caused such agonizing pain in the back that, in order to obtain relief, he was compelled to rest night after night in a chair, bent nearly double. The tumour had increased, but not to its original magnitude. It felt less firm, and its impulse, now visible and heaving, was of semi-liquid character. The murmur still existed, unchanged, over the former site; but there was now in addition a harsh systolic murmur heard opposite on either side of the spine. His legs and thighs were cedematous; but as this condition soon subsided, it was more likely to have resulted from his constrained position than from any permanent pressure upon the cava. The kidneys were still, apparently, in their physiological condition. The opiate, formerly so successful, had to a great extent lost its power. He was, however, persuaded to try and get some rest in bed by lying upon his stomach; from this posture, assisted probably by the opiate, he obtained extraordinary relief. The former treatment was resumed, with the exception that the iodide of potassium was substituted for the sesquichloride of iron. But, after some few weeks, this remedy was laid aside, as the tumour became both larger and softer during its use. He has recently complained more of pain in his body, and his appetite is much diminished. The prognosis is now highly unfavourable.

In this case, did not the strongly pulsating tumour too plainly reveal the nature of the malady, severe pain in the back, excited at night by the recumbent posture, would be almost the only existing symptom. The peculiarity of the pain in this case recalls to my mind a similar instance occurring in the practice of Mr. Selwood, of Ampton-place, in which pain, produced under the same circumstances, was also the only symptom. A gentleman about fifty years of age, who had usually enjoyed a fair share of health, complained, some little time

before his death, of pain in the back, coming on at night soon after he went to bed; it was occasionally severe enough to compel him to get out of bed. He did not, however, seek any medical advice, supposing his suffering to be merely rheumatic. One evening, whilst supping with a friend, he suddenly complained of pain in the stomach, and became extremely faint. After swallowing some brandy and water, he rallied sufficiently to return home, accompanied by his friend, who assisted him to bed, and left him apparently much restored. The following morning he was found dead in his bed. Mr. Selwood discovered, on making the post-mortem examination, that an aneurism of the abdominal aorta, involving the celiac axis, had burst and discharged a large quantity of blood into the peritoneal sac. Atheromatous and cretaceous deposit had occurred over an extensive track of the aorta and branches of the axis. No erosion of the vertebræ existed.

The next case, also, is one in which severe pain of the back was, latterly, the prominent and, indeed, the main symptom. It is the more important to mention this fact inasmuch as careful and almost daily physical exploration of the abdominal and vertebral regions entirely failed in detecting any abnormal condition. This case, moreover, presents some most interesting points of detail and, if not unique, is at least of the greatest anatomical importance, being one of aneurism of the inferior mesenteric artery. For excellent notes of the symptoms and post-mortem results, I am principally indebted to the kindness of our resident medical officer, Mr. Hill. My thanks are also due to Mr. Wakley for permission to make use of the case.

Elizabeth M—, aged twenty-four, was admitted under my care Oct. 24th last, but was transferred to Mr. Wakley, it being found that she was suffering from fistula in ano and syphilitic disease. Five months ago an abscess formed near the rectum, causing the fistula. Two months later she contracted syphilis, and was at the time of her admission into the hospital affected with scaly eruption, mucous tubercles about the anus, fissures and ulceration of the tongue, loss of hair, irregularity of the pupils and opaque spots upon the cornea. She was, moreover, considerably emaciated. A mild mercurial treatment was adopted. No sooner did the gums become slightly affected than the eruption disappeared, the mucous tubercles healed over, and the general health improved. On Nov. 7th Mr. Wakley operated on the fistula, and by the 25th the wound had thoroughly healed.

Just about this time the patient began to complain of severe pain in the back and loins, extending to the front of the thighs. This pain, nearly coinciding with a menstrual period, was naturally supposed to be the result of uterine functional disturbance. A warm hip-bath was ordered, and a dose of compound decoction of aloes prescribed night and morning. Two days subsequently to the accession of the pain, the menses appeared in the usual quantity, but the pain still continued. A warm purgative mixture was again administered, and after it had acted freely the pain ceased, and the patient expressed herself as altogether much relieved.

Nov. 28th.—The appetite was better, the countenance less anxious, and the patient entirely free from pain, but still unable to move about. The citrate of iron and quinine was ordered, with good nourishing diet and eight ounces of wine daily.

The improvement continued during the following month. She was able at length to walk about the ward, and occasionally took exercise in the hospital grounds. Now and then she complained of abdominal pain.

Dec. 29th.—The patient was compelled to keep her bed, the severe pain in the back and loins having returned. Her appetite again flagged.

From this time she was quite unable to stand erect, being bent nearly double, and began to lose flesh daily. At this period, and often subsequently, the abdominal and lumbar regions were carefully examined. The liver, apparently healthy, occupied its normal position; the other viscera offered nothing unusual. The action of the bowels was regular. The urine was free from albumen or other abnormal elements. Pressure over the left lumbar region caused much pain and tenderness. There was, however, no impulse perceptible over this region, nor did the stethoscope reveal any abnormal sound. The spinal column was free from either pain or tenderness, and the motor and sensitive functions of the lower extremities were unimpaired.

Jan. 6th.—Up to this date the patient had been daily losing flesh, but was in other respects unchanged. Early in the morning she felt a sensation of something giving way internally, and almost immediately afterwards passed more than a pint of blood from the bowels. Lead and opium were given. There was no return of the bleeding.

She remained recumbent and greatly prostrated until the 15th, when, during an attempt to get out of bed, she fell suddenly dead. The body was so completely blanched, that it was obvious death was the result of internal hæmorrhage.

Autopsy, thirty hours after death.—Body completely blanched. About three pounds of coagulated blood were found in the peritoneal sac, beneath the liver, and in the hollow of the pelvis, pressing upon the viscera. After the intestinal tract was secured by ligatures, the intestines were carefully followed out. The ileum, about its middle portion, was found adherent to a tumour situate behind and between the intestine and vertebral column. The intestines were now cut away a few inches above and below this tumour, and the other viscera removed. The tumour was now carefully examined. It was found to be lying across the spinal column, bulging to the left side, and corresponding to the four upper lumbar vertebræ, which had escaped erosion. It was firmly adherent to the spine and quadratus muscle by dense fibrous tissue; in front the mesentery was attached to its lower part, while the upper part was covered by the intestine, which formed the sole covering to the upper and anterior portion of the tumour. Upon dissecting the tumour from its posterior attachments, the abdominal aorta and cava were arrived at, lying behind and to its right. Upon opening the aorta throughout its extent, the orifice of the inferior mesenteric artery was found patulous, but both enlarged and irregular. When the latter artery was laid further open, an aneurismal sac was discovered near its origin, about the size of a large hen's egg, nearly filled with laminated and decolorized coagulum. A director, inserted within the sac, passed freely out between the fibres of the muscular coat of the intestine. It was here that the sac had finally given way, separating this coat to some extent. The external coverings of the sac were dense, excepting where the tumour acquired its covering from the intestine; here little more than the mucous lining interposed between the contents of the sac and the interior of the bowel. On palpating the posterior face of the intestine a sense of fluctuation was conveyed to the finger. The aorta itself was perfectly healthy. Beyond some scattered tubercles in both lungs all the remaining organs were in their normal condition. The entire intestinal canal was laid open, and most minutely examined; but, with the exception of the portion of ileum alluded to as adherent to the sac, no vestige of change was discovered. On the interior of the mucous membrane of this intestine, near the centre of the adhesion, there existed faint traces of a very slight cicatrix, indicating probably the seat of the first bleeding.

A, Aorta. B, Vena cava. C C, Intestine cut off at either end. D, Opening of inferior mesenteric artery into the aneurismal sac. E, Intestine bent upon itself anteriorly. F, points to the situation where the intestine forms the anterior covering of the sac. G, True aneurismal sac. H, Aneurismal sac filled with coagulum. I, Bifurcation of aorta and cava.

Subsequently to the post-mortem examination the mother of the patient stated to Mr. Hill that, ten years ago, a little boy went behind her daughter, and pushed a dagger into her private parts. She was laid up from this injury upwards of two months.

If all the points in this last case are carefully considered, the difficulties which prevented an accurate diagnosis will be apparent. The first complaint of severe pain in the back and loins, extending to the front of the thighs, was made about the time of a normal menstruating period. It was, therefore, fairly to

be assumed, under all the circumstances of the case, that such pain might possibly be connected with the congestion incident to this process. Its persistence, however, after the healthy completion of the function, together with the entire absence of any direct uterine symptoms, rendered such an assumption no longer tenable. Was the supposition of a rheumatic or syphilitic affection of the lumbar muscles and fascia better calculated to explain the nature of the pain? Not only was there an absence of tenderness upon pressure of these structures generally, but the pain on movement was not of the intensity to justify such a conclusion, neither did the urine throw down any deposit of lithates. After a time it was found that pressure over the left lumbar region caused marked pain and tenderness. The corresponding kidney could scarcely be supposed to be the seat of disease, as no irritability of the bladder existed, nor did the urine contain either albumen or any other foreign element whatever. It was not, however, unreasonable to suppose, from all that had preceded, that either inflammation or suppuration of the lumbar glands might exist, or even that an abscess might be forming in the psoas region. But neither unusual fulness in the lumbar region, superficial œdema, nor the retraction of the limb, occasionally present in such cases, was observed. The sensation of internal rupture, almost immediately followed by intestinal hæmorrhage, was, without doubt, a most important occurrence, and sufficient to invite, as it did, a careful search for the possible existence of an aneurismal tumour. No abdominal impulse nor swelling could be detected. In the left lumbar region neither fulness, resistance, nor impulse was observed, nor did the stethoscope detect any abnormal sound. As stated before, the only sign elicited was one of very varied import—pain and tenderness on pressure. The results obtained negated, then, the notion of aneurism. Age and sex, too, slightly opposed it. When, moreover, it was remembered how extremely rare is the occurrence of hæmorrhage from rupture of an aneurismal sac into an intestine, it was at last thought more probable that the bleeding was the result of ulceration of some portion of the intestinal canal, involving a vessel—an ulceration, perhaps, connected in some way with the general cachexia of the patient. It should have been mentioned that the pain in this case might have been explained on the hypothesis of a lumbo-abdominal neuralgia. No doubt it really was of this character; not idiopathic, but the direct result of pressure of the sac upon the lumbar nerves.

Brook-street, April, 1864.

ON DIVISION OF THE CILIARY MUSCLE.

WITH CASES.

By HENRY HANCOCK, Esq., F.R.C.S.,

SENIOR SURGEON TO THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

(Concluded from p. 379.)

CASE 5.—Lady — was brought to me on the 5th September, 1863, by my friend Mr. Yate, of Godalming. She had entirely lost the sight of her right eye, not being able to distinguish light from darkness; and the sight of the left eye was so defective that she was obliged to be led into my room. She informed me that her right eye had been failing for above two years, but she had no idea of its entire blindness until some six months ago, when upon accidentally covering her left eye she was in total darkness. The sight of the left eye began to fail two months ago, after she had worked very hard for some weeks at fine fancy work for a charity bazaar. She cannot now (Sept. 1863) either read or write, even with the aid of glasses. When at the dinner table, if she attempts to help herself to wine or water, she commonly pours the fluid over the table instead of into the glass; and it has lately become unsafe, from the state of her sight, for her to walk by herself even about her own house, as she has upon several occasions fallen down, once down stairs. She complains of great pain over the right eye, and says that for the last three days it has extended over the left eye. The right eyeball is exceedingly tense; the left but slightly more so than natural.

From the length of time the right eye had been affected, the difference in the tension of the two eyes, the excess and priority of the pain over the right eye, as well as from the general history of the case, I was led to infer that the rapid diminution

of sight in the left eye depended upon something beyond its recent undue employment: that it was the result of sympathetic irritation connected with the right eye, rather than of organic mischief in the organ itself. I therefore proposed to Mr. Yate that, for the present at all events, we should leave the left eye alone, but that I should divide the ciliary muscle in the right eye; not with the expectation of improving the sight of that eye (complete blindness having existed for a long time), but with the hope that relief of its tension might arrest the irritation of both eyes, and in that way be the means of allaying the pain, and at the same time of restoring and preserving the sight of the left eye, which could scarcely be accomplished while the extreme tension of the right eye remained. Mr. Yate having concurred in these views, I performed the operation upon the right eye on the 12th September. When I saw her ladyship on the 14th, she informed me that the pain of the operation had been but trifling, and that she had lost all pain over the eyebrows. She continued to improve gradually, and at the expiration of a month was able with the left eye to read and write without the aid of glasses. She presided at the head of her table; could go about by herself; and at the end of five weeks resumed her rides on horseback, which for some three months previously she had been obliged to abandon in consequence of her failing sight. She had not any return of the pain over the eyebrows after the operation.

January 8th, 1864.—In a note of four pages and crossed, Lady — writes me word: "My eyes are much the same. I can see to write a letter, read a little, and make flowers a little. I never use them much." And Mr. Yate (Feb. 26th) informs me that "Lady — reads small print with great ease."

CASE 6.—Mrs. O —, who had just arrived from Tasmania, was brought to me by her agent on the 30th of September, 1862, having lost the sight of both her eyes. She informed me that she could scarcely see light from darkness, and that during her voyage she could not see the vessel in which she came over; that she was obliged to be fed by herself, as she was so blind she was not allowed to sit at the passengers' table; and that the captain used to have her brought up daily and placed in a chair upon deck, where she remained until evening; but that she could do nothing for herself. She settled in Australia about twenty-five years ago, and having married a convict, for many years led a life of great hardship, having frequently to sleep in the open air. However, after a few years' hard work, she and her husband managed to save sufficient money to settle on a farm, and subsequently to take a public-house. Her husband died, and she then gave way to such intemperate habits as frequently to lose her reason. She again married, and, her second marriage proving unhappy, she drank to greater excess than before, until she entirely lost her sight. Having gone to bed one night intoxicated, she awoke in the morning unable to see the daylight—in fact, totally blind. She consulted various medical men in Australia, but obtaining no benefit, she came over to England. She complained of great pain over the eyes and in her head; that she could not discern any object, everything appearing to be black; she could not distinguish features, but could look at the sun or the most powerful glare of light without being in any degree affected. Upon examination under the ophthalmoscope, the vitreous humour and fundus of the eyes were so hazy that the condition of the retina could not be determined. The eyeballs, however, were more tense than natural.

From what I had observed in other cases, and from the persistent frontal pain and tension of the eyeballs, I considered that she would derive benefit from section of the ciliary muscle, and therefore suggested the operation to her, and accordingly performed it on the 4th of October, 1863, having been obliged to delay its performance in consequence of her having got tipsy the day after she consulted me. The day after the operation the frontal pain subsided, and whilst under my care it did not return. When the bandages were removed, four days after the operation, she said, "I can now see that I have a white dress on, which I could not do before." In a day or two she could discern the colours of a carpet-bag, could see the wick of a burning candle, and tell a silver coin from a gold one when held in the hand, and without her touching them. In a week after the operation she could tell the time on a church clock on the other side of the street; and within a fortnight at one of my visits I found her unpacking her things, and arranging them upon the table in her room, and she took several of them up and told me their colours, &c. At the end of some fifteen days she went into the City to see her agent, when she told the clerk what time it was by his watch, also the colours on the floor-cloth, adding that her sight was so much improved she