THE
SUCCESSFUL TREATMENT OF ANEURISM

BY
POSITION AND RESTRICTED DIET.

BY
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IN the paper which I published some years since upon the cure of internal aneurism by position, cases were adduced to show that consolidation of the contents of the sac of an aortic aneurism (as enunciated by Dr. Bellingham) could be systematically brought about, and not only the life of the sufferer preserved, but health with all its enjoyments restored.

That such is the fact an extended experience has confirmed; and if the plan of treatment by position be but *steadily* and *perseveringly* carried out a successful issue can (in suitable cases) almost be guaranteed. This may seem very strong language to use, considering the fatality which has hitherto attended upon internal aneurism, but I employ it advisedly, being assured of its correctness.

The question then naturally arises as to the meaning of

the term "suitable cases," and the reply is, those instances in which the aneurism springs from the front of the aorta, where the sac is entire, and the individual possesses a fibrinating power in his blood.

CASE 1.—*Aneurism of the abdominal aorta cured by rest and restricted diet in thirty-seven days.*

The first case that in illustration I am about to submit to the notice of the members of the Society this evening, being accompanied by the aneurism itself, may, indeed, seem to be a contradiction of the statement; but when, in juxtaposition to the aneurism, the cause of death is exhibited, the apparent anomaly is explained; for sinking under Bright's disease, and succumbing to that fatal alternation in the structure of the kidney which characterises this affection, the cause of the death of the patient is made manifest; parenchymatous nephritis, with its interlobular cell-formation, having destroyed the circulation of the organ, perverted its normal secreting power, and thus terminated life.

The preparation and drawing are now before the members of the Society, for their inspection.

For the opportunity of observing this case I am indebted to Dr. Hugh Thomas, of Liverpool, in whose practice it occurred, and who recommended the patient to come to Dublin and place himself under my care. He arrived at the City of Dublin Hospital upon the 7th of February last, in a very exhausted condition, the steamer in which he was crossing over having been lost, and he and some of the crew saved by a life-boat; but having been landed upon a beach, they were exposed (wet through), for many hours of the night, to the full fury of the gale.

The name of the patient was John K—, his age thirty-one years, and he was a shipwright by trade.

From Dr. Thomas I learned that his father had died of cardiac disease. J. K— said that about twelve months previously, after a hard day's work, he first felt dorsal pain,

for which he consulted Dr. Thomas, who prescribed rest from labour, and the endermic use of morphine. This afforded considerable relief, and after a while he resumed his work. The pain, however, returned, and he had again to discontinue his employment. Four months afterwards aortic pulsation appeared, which gradually increased up to the time of his admission into hospital. Upon examination of the abdomen a circular aneurismal tumour was found, situated two inches below the ensiform cartilage, measuring three and a half inches in either diameter ; a loud but soft bruit de sofflet accompanied the first sound of the heart, which was audible to the naked ear laid *gently* upon the surface of the abdomen ; but, as usual, was lost upon the patient standing upright. The pulse was very rapid and greatly affected by position, being 104 when lying down, 120 sitting up, and 170 after walking once or twice slowly across the ward. It was intermittent also at every third beat. Sleep was interfered with in consequence of the dorsal pain, but in other respects his functions were natural.

He was left quietly in bed for a few days, in order to get over the shock consequent upon the voyage, and permitted to take such food as he had a fancy for. Upon the 17th of February treatment was commenced, and the recumbent position, with strictly regulated diet, enjoined.

The daily allowance of food was, for—

Breakfast.—2 oz. of bread and butter ; 2 oz. of milk, or tea.

Dinner.—3 oz. of mutton ; 3 oz. of potatoes, or bread ; 4 oz. of Chancellor's claret.

Supper.—2 oz. bread and butter ; 2 oz. of tea.

Total, per diem.—10 oz. of solid food and eight ounces fluid, and *no more*.

My directions were steadily maintained by the patient, who, I believe, never once exceeded or arose from the bed until permitted to do so, but continued lying constantly upon his back, or else rolling himself gently over on to one or other side.

Upon the 6th of March he reported that he *felt* the aneurism getting better.

His pulse, though still intermitting every third beat, had now fallen from 104 to an average of 69 in the minute, a diminution of 35 beats, or of no less than 50,400 pulsations or distensions of the sac in the twenty-four hours. The dorsal pain, too, had so much declined in severity, that the injection of morphia was ordered to be discontinued, and the hydrate of chloral, in doses of thirty-five grains, administered instead. This, however, did not suffice to soothe the pain, and had also a tendency to nauseate the patient. It was therefore discontinued, and the morphia injections re-employed.

Upon the 14th of March the patient stated that he was daily becoming easier, and *that he felt he was getting well*.

He was this day examined by Mr. Timothy Holmes, who, being in Ireland, took the opportunity of visiting the patient.

On the 26th of March, K— remarked that the sensation in the aneurism was as though it was being squeezed, and upon examination by the hand it could be felt like a solid mass. The bruit, too, had all but disappeared.

Thirty-seven days had now elapsed since the treatment was commenced. He was still confined to bed. On the 14th of April he had a sharp febrile attack, and complained greatly of thirst, which was met by sucking transparent ice. The quantity of urine now passed was noticed to have very much diminished, not amounting to more than ten or twelve ounces in the twenty-four hours, and upon examination was found to be albuminous.

On the 15th of April there was a total suppression, but on the 16th the kidneys resumed their functions.

On the 21st of May he had another sharp febrile attack, accompanied by total loss of appetite and furred tongue, and his thirst was again very great.

He was now allowed, in addition to the ice (of which he took about four pounds per day), cider to drink as freely as he wished.

His pulse had gradually increased from 62 to 86.

Upon the 31st of May he was free from fever, his appetite had returned, and the quantity of urine passed had increased from twelve to sixteen ounces in the twenty-four hours.

Upon the 2nd of June there was another relapse, and a renewal of febrile symptoms, the pulse rose to 90, and the general depression was considerable. By the 13th of June the patient was sensibly emaciating. He had been sitting up for some days, but preferred the lying position. The aneurism could now be felt readily as a hard tumour to which pulsation was communicated, and could be grasped by the hand through the abdominal walls. By the 1st of July sickness and irritability of stomach set in, and became almost continuous. Towards the middle of the month he was better in some respects, but very weak. He was allowed to go out into the air and take whatever exercise he liked. By the 31st of July œdema of the feet and legs supervened, and the urine was now *loaded* with albumen.

On the 22nd of August the pupil of the right eye became dilated, whilst the left remained natural in size.

Upon the 28th of August the œdema of the feet and legs had begun sensibly to decline, whilst the urine was now literally a solution of albumen.

On the 4th of September the œdema had totally disappeared.

Upon the following morning, the 5th, after partaking of his breakfast, he said that he felt sick, and soon vomited. This was succeeded by an excruciating pain in the supra-orbital regions. Shortly after which he became quite blind, so that he could not see a sheet of white paper held before his eyes. He suffered, too, from an intense and unquenchable thirst. At 5 p.m. he became suddenly comatose, the eyes being upturned and the pupils irregular. This state continued for about ten minutes, when an improvement appeared, and as if likely to be followed by consciousness; but, instead, a violent epileptiform fit ensued, engaging all the muscles of the body, which became rigid, and the hands and feet deeply livid. The pupils were widely dilated.

Between this period and 1 a.m. of the 6th he had fourteen similar convulsions, one after another, at short intervals. Between each fit the breathing was stertorous, and the pupils contracted, dilating again directly that the convulsion came on.

He expired shortly after 1 o'clock on the morning of the 6th of September.

Sectio cadaveris.—The post-mortem examination was made thirty hours after decease.

The body was moderately nourished, and there was no appearance of œdema of the feet or legs. The surface generally was rather pale, with slight lividity of the abdominal walls.

The brain was most carefully examined. It was flabby looking on the convoluted surface, and anæmic, with some serous effusion at the base; but the cerebral and cerebellar substances, the ventricles, and every portion of the brain were perfectly healthy, and no abnormal condition could be detected, though every portion was sliced and most minutely inspected.

Upon dissecting off the pectoral muscles they were found healthy, and rather florid than otherwise, upon section.

The lungs and heart, where the sternum was raised, presented no abnormal appearance, and these organs upon removal were all found perfectly healthy; but the right pleural cavity contained a large quantity of serous effusion, the pleura itself being pale and free from any inflammatory deposit. The heart was perhaps a little larger than natural, but its valves and chambers all quite sound, and the thoracic aorta with its branches natural in every respect.

Upon reflecting the parietes of the abdomen, the peritoneum was everywhere healthy, and the viscera apparently so. The stomach was distended with air. On raising it, and turning the intestines to one side, a large purplish-coloured mass came into view, situated immediately below the pancreas, which formed the upper boundary of the tumour. It measured seven inches over its convexity. This

(the aneurism) sprang out from the anterior aspect of the aorta, immediately below the giving off of the cœliac axis, and three inches above the bifurcation. The aorta itself and its branches were all perfectly healthy, and not a sign of atheroma could be detected by the eye. The aneurism, with the kidneys attached, was then carefully removed, and the spinal column examined. It was perfect; no trace of the attachment of the tumour being perceptible, and nothing differing in appearance from that of a healthy spine from which an ordinary aorta had been detached. The liver was found fatty upon section.

The kidneys were both congested, but bore a striking difference in appearance. The right was rather smaller than natural, whilst the left was greatly enlarged, measuring five inches in length from above downwards, and three and a half inches across, with the infundibulum dilated. Upon section this organ exhibited a well-marked specimen of interstitial nephritis, with fatty degeneration of the epithelium.

The aneurism itself was *completely solid*, and upon section was found filled, from the circumference to its centre, with finely laminated fibrine. Posteriorly the aorta was healthy, with its minutest branches patulous, and performing their duty. The fibrine that filled the aneurismal sac upon either side of the spine was densely hard, whilst the aorta passed downwards in the centre somewhat triangular in form, the base of the triangle resting upon the spine, and the apex meeting the innermost of the fibrinous layers, their interspace affording a free and uninterrupted passage for the blood from the heart to the lower half of the body.

CASE 2.—Aneurism of the abdominal aorta cured by rest and restricted diet in twenty-one days.

The next case which I shall bring under the notice of the Society is one of aneurism of the abdominal aorta cured by rest and restricted diet in twenty-one days. It occurred in the practice of Dr. Carte, physician and surgeon to the Royal

Hospital, Kilmainham, and I cannot, I think, do better than present it in Dr. Carte's own words, as contained in the following letter, addressed to myself:

“ROYAL HOSPITAL, KILMAINHAM:
28th October, 1873.

“MY DEAR SIR,—

“I send the preparation of aneurism of the abdominal aorta which I mentioned to you, and which was cured upon your plan of treatment. The patient, John R—, æt. 79, a pensioner from the 20th Dragoons, a good old soldier, who had served in India for ten years, including the Mahratta war, was admitted into the infirmary on the 4th May, 1866, suffering from aneurism of the abdominal aorta. It was situated about the bifurcation of this artery, and had a distinct bruit extending over a diameter of about $2\frac{1}{2}$ inches.

“I explained to R—the dangerous nature of the disease, and he consented readily to abide by my directions and advice, which he did. The aneurism gradually solidified, and he was allowed up at the termination of three weeks.

“From this time, and for a period of three years, he enjoyed very good health for a man of his advanced years, and he finally died upon the 28th of July, 1869, of debility and old age.

“Upon examination of the body after death I found the contents of the aneurismal sac to consist of successive layers of fibrine, disposed concentrically and very firm. Nothing could be more satisfactory than the progress and termination of this case, which contrasted strongly with another which I have had subsequently in hospital, and of which I may as well give you the history, as it will be interesting to you.

“This patient's name was William R—, a pensioner from the Royal Artillery, æt. 46. He was affected with abdominal aneurism situated above the umbilicus, and apparently measuring three inches in diameter.

“To him also I explained the true nature of his complaint, and he agreed to lie recumbent and to do all according to my directions in reference to diet, &c.; but after three days he

became discontented with the confinement to bed, and persisted in walking about the ward. As, however, the aneurism began to increase to size, and its pulsation became distressing, he again agreed to submit to treatment, but with the same result as before.

"I therefore gave up all hope of being able to treat him successfully, and the man died on the 27th of April, 1873, two months after his admission into hospital.

"J. R—, on the contrary, lived for upwards of three years after the consolidation of the aneurism, and died ultimately of debility and general break up of constitution.

"As the cases were nearly similar in character and all other respects, I have every reason to believe that an equally successful result would have taken place in W. R—'s case as in that of J. R—, had W. R— only had the patience requisite for recovery.

"The preparation which I send is very hard, from having been so long in pure spirits, but it well shows the perfect condition of the sac and the protected state of the spinal column.

"I remain,

"Very truly yours,

(Signed) "WILLIAM CARTE,
"Physician and Surgeon, Royal Hospital,
Kilmainham.

"To JOLLIFFE TUFNELL, Esq."

CASE 3.—Aneurism of the popliteal artery cured by rest and restricted diet in twelve days.

The concluding case that I shall adduce is one of aneurism of the popliteal artery, and I believe that I am correct in saying that it is the first instance in which this disease has ever been systematically treated by position and diet alone, and that consolidation of the contents of the sac and the subsequent recovery of the patient have been brought about without any interruption of the arterial stream, by mechanical arrest being in one way or another applied.

For the notes of this case and the opportunity of observing it I am indebted to Dr. Muschamp, surgeon of the Royal Dragoons.

The patient, named Roger T—, æt. 37, was a trooper in that regiment, in which corps he had served for sixteen years. He was a steady, sober, well-conducted man, and in possession of three good-conduct badges. He had been three times in hospital for rheumatism, but never for syphilis, although the marks of suppurating bubo in the left groin showed that at some period prior to enlistment he had most probably contracted a sore that was followed by abscess. He was admitted into his regimental hospital upon the 16th of December, 1872, complaining of a sharp pain in the left knee joint, and upon examination a well-defined tumour (the size of a hen's egg) was found occupying the popliteal space. It pulsated visibly, and nearly equally in every direction. Compression of the femoral artery at once stopped the pulsation and reduced the size of the swelling. The bruit was very indistinct; in fact, could hardly be heard.

The history which the patient gave was that about a fortnight before admission he felt pain in the knee, and that some four or five days afterwards he noticed a swelling in the back of the joint. He could not account for its occurrence. Upon admission there was no excitement of the arterial system. The pulse was regular, and the heart's sound natural, but, if anything, rather feeble, and the second sound not quite as distinct as the first. The aneurism not being accompanied by any urgent symptom, there being neither heat nor fulness of the joint or other sign to indicate that the tumour sprung from the front of the artery, it was determined, in consultation, to treat the case simply by position and restricted diet.

The patient was therefore placed recumbent, with the leg raised upon a pillow and the knee slightly bent, a cold evaporating lotion being kept constantly applied *over* the joint.

Upon the 19th there was little apparent change, excepting

that the pain which had at first been described as sharp had now become rather less.

On the 22nd the pulsation was decidedly diminished, and when the hand was placed upon the tumour in the popliteal space it felt firmer.

Upon the following day the pulsation was still less distinct, and upon the 28th of December (that is, twelve days after admission into hospital) the disease was cured, the contents of the aneurismal sac being solid and devoid of pulsation.

The pulsation of the posterior tibial artery (at the ankle) had also stopped. The heat of the foot had diminished as compared with that of the opposite limb, in which the circulation was, of course, perfect.

Upon the 31st of December absorption of the fibrine filling the aneurism had commenced, and the tumour had begun to decrease in size, but for precaution sake he was kept confined to bed for a few days longer.

Upon the 15th of January he was permitted to walk about, and upon the 22nd of February was discharged from hospital, and employed at light dismounted duty, which he has ever since continued to perform.

From Dr. Muschamp I have recently heard. His letter is dated Edinburgh, October 17th, 1873. He says, "Roger T— is still in the regiment, and I am happy to tell you that he suffers no inconvenience from the obliterated aneurism; the only noticeable circumstance being that the calf of the leg is fully an inch smaller than the right, and there is still no pulsation perceptible in the posterior tibial artery at the ankle."

Before closing my remarks I would observe that but a few years since this man would have been subjected to an operation that, in the hands of the ablest surgeons of their countries—for instance, such men as Hunter, Pott, Cline, Home, Cooper, Scarpa, Blizard, Bell, Travers, Brodie, Liston, Guthrie, Dupuytren, Roux, &c.—would have terminated, *in one case out of every four*, either in the death of the patient or of his being more or less maimed for the remainder of his life.¹

¹ *Vide* Crisp's, Norris', and Philips' Tables.

Now, how changed is the position of the patient—how altered the case! Left lying horizontally for a few days, with the affected limb at perfect rest, nature (aided by art) alone effects the cure. That similar cases to the one which I have last detailed to the Society will come before its notice, and with the same successful termination, I feel assured, for why should not a similar result be brought about in all cases of popliteal aneurism where the sac is perfect and the tumour not rapidly increasing; where the aneurism springs from the posterior aspect of the artery, protruding itself into the popliteal space (thus avoiding the joint), and in which the patient possesses a fibrinating power in his blood? These conditions happily exist in the majority of cases, the contrary being the exception to the rule, and consolidation of the contents of many a popliteal aneurism will therefore, I am convinced, be hereafter brought about simply by position alone. Why, I repeat, should they not? If aneurisms of the thoracic and abdominal aorta can be filled with fibrine in successive layers, and thus cured (cases in which the impulse that produces the destructive action is but a few inches distant from the sac), surely, with the diminished quantity of blood supplied by a smaller vessel, consolidation by deposit should, in popliteal aneurism, much more readily ensue.