The Treatment of Gonorrhœa in Females is similar to that recommended for males, except that in the former, astringent injections may be used of much greater strength, and at an earlier period, but not till the primary symptoms shall have subsided.

Whilst these are present, a solution of the Plumbi Diacetat may be used, and afterwards the following:—Zinci Sulphatis, dr. iv.; Aluminis Sulphatis, dr. ij.; Pulv. Plumbi Compositi, oz. j., Aquæ simplicis, Oij.

[The compound lead powder will be found in the L. P. 1788. Take of Ceruse five ounces, Sarcocol one ounce and a half, Tragacanth half an ounce. Rub them together into powder.]

In some cases ten grains of the bichloride of mercury may be dissolved in a quart of water for the same purpose.

The discharge is often extremely obstinate, in which case the balsam of copaiba, turpentine, olibanum, the sulphate of zinc, and bark may be given; and if the disease should not yield to these, the patient may take five or six grains of the sulphate of alum, with ten grains of the Sanguis Draconis three times a-day; the cold bath, also, may be added, if necessary, which is often found efficacious in females.

Treatment of Tumour of the Labium Pudendi.—This requires little more than the usual treatment of inflammation. The parts should be fomented and poulticed.

If an abscess of the lacunæ break spontaneously, it is apt to continue for a long time, and is often mistaken for gleet or internal abscess. The true character of the case may be known by considerable fulness and hardness of the labium on the side involved.

The best treatment will be to lay open the abscess by a crucial incision, to dress it down with dry lint, and afterwards to cover it with an emollient poultice. In a few days the sore might be sprinkled with red precipitate powder, so as to produce a slough of the lower surface of the sac; and when the sac has been thus obliterated, healthy granulations will probably form, and the cavity soon be filled up and healed.

Southampton, June 1st, 1848.

(To be continued.)

CASES FROM PRIVATE PRACTICE.*

By JOHN RICHARD WARDELL, M.D., Edin.

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CASE VIII.

SUBCLAVIAN ANEURISM.

REMARKS.

Aneurismal tumours, both on the part of surgeons and physicians, have in later times received the special attention of accurate observers, so that now their

pathology is well understood, and more correct notion entertained respecting their causes; nor is it surprising that so many inquirers have interested themselves in the subject, seeing that the affection is one of the gravest character, and when occurring in certain of the larger vessels, admits not of cure. Galen was the first who entertained any just notions of the disease; afterwards Vesalius and some others made attempts at giving a description of it. In more recent times Lancisi, Guattani, Monro, Morgagni, Scarpa, Hunter, Hodgson, Breschet, &c., have given elaborate accounts of every kind of aneurism. Various experiments have been tried upon animals, both in ascertaining their cause, and the best means of medical as well as operative cure. The former has manifestly little, if any, effect, notwithstanding the assertions of Valsalva and his followers; and where the surgeon's art is impracticable, we may deem the case as one of a hopeless nature. It is true that in certain rare instances a spontaneous cure has taken place, even in aneurismal enlargements of the great vessels, yet such are rare instances, and in our prognosis could form nothing more than a remote possibility.

Aneurisms may be divided into two great classes, *spontaneous* and *accidental*, the former resulting from a gradual and diseased change in the coats of the vessel, almost invariably the middle and internal tunics first becoming affected; the latter from sudden and positive laceration of the coats, as by powerful exercise, sudden tension, and external injuries.

Some authorities have affirmed, relative to spontaneous aneurism, that there is *invariably*, a giving-way of the middle coat; and such was the opinion of Scarpa, who says, "there is only one form of the disease,—viz., that caused by a rupture of the proper coats of the artery, and an effusion of arterial blood into the cellular sheath which surrounds the ruptured artery," a doctrine which, although is in the main correct, is not at all times true, because we know that dissection has in some instances proved the contrary. The whole of the coats may, by long-continued disease, become so softened and deprived of their natural elasticity, as to simultaneously dilate, and this dilatation has been known to progress to a very considerable degree, all the tunics preserving their integrity. The fibrous or middle tunic is by far most apt to assume a morbid state; it loses its natural consistency, and becomes soft and flabby; in the interstices are often deposited calcareous matters, when the lining membrane changes to an indurated condition, and thus is rendered very liable to rupture. Sometimes dilatation will go on for a considerable period, and then the internal coats divide, as if from rupture, induced by over dilatation. The atheromatous condition of the fibrous tunic is the morbid state most commonly observed, and to this opinion the majority of morbid anatomists have subscribed. In those vessels which are subject

*Continued from page 379.

to much action, as the popliteal, disease is more prone to become manifest; hence the well-known fact of lamp-lighters and postilions being so liable to have bloody tumours in that part; and I well remember, when studying in Edinburgh, the observation was repeatedly made, that aneurism of the arch of the aorta was much more prevalent in the large towns of Scotland than England, dependent on the inhabitants living in flats, and thus the excitement given to the circulation, by ascending a considerable number of steps, by degrees induced dilatation of the arch. The long straight portions of an arterial trunk are never so liable to manifest morbid changes as the curvatures and the junctions of branches, the reason of which, on reflection, is obvious. When the blood, *in transitu*, impinges with more force against one part of the walls of the vessel, at such points will disease be liable to occur, because the vasa vasorum may thus be impaired in their functions or structure; hence the healthy vitality of the tissues which they nourish will be in some degree diminished, thus predisposing to morbid action, and because by long and continuous repetition, slight disorganization, by softening or rupturing the elementary fibres might be caused. The great power with which the column of blood is sent from the left ventricle into the arch, no doubt contributes to the predisponent causes in the induction of frequent aneurismal enlargement, and especially where there is valvular or other obstruction, and an abnormal divergence is given to the current. Morbidly increased impulse, especially if concentrated at certain points, cannot fail to endanger the healthy condition of the tissues at those points. Philosophical experiments made long ago by Lancisi and others, on leaden water-pipes, proved that partial obstructions made in the course of the pipe, and thus impelling the fluid with force towards a certain point, will burst the walls of the pipe; hence, deducing an analogy from such experiments, we may see the manner in which irregularities in the arterial trunks are calculated to operate, because the two fluids, in their transit, are subject to the same natural laws.

In spontaneous aneurism it does not always happen that there is entire dilatation,—that is of the calibre of the vessel, and thus a nodus, bulges from one side, the opposite lateral aspect of the arterial trunk preserving its natural evenness. When, however, the disease has for some time progressed, the entire walls of the vessel become diseased, that portion of the trunk dilating the most, against which least resistance is offered by the juxta-position of other organs; hence in aneurisms which have been called visible or external, as in this instance, we see the pointing was towards the surface. In spontaneous aneurism, the patient cannot with any preciseness mention the period of its commencement, whilst on the other hand those, for sake of contra-distinction, termed *accidental*, can

generally be referred to a particular time, when of course the laceration of the fibrous coat would produce some degree of pain, or a sensation of giving way. Armstrong, as mentioned in the report, could assign no cause for the tumour, nor with any degree of exactness speak of its origin; hence it is fair to presume that it was rather referable to gradual disease of the tunics than to their rupture.

I have above observed that Scarpa contended for rupture of the fibrous tunic, indeed he denied the existence of aneurism without the middle tunic giving way. Mr. Hodgson, and several other eminent inquirers, have expressed themselves differently,—viz., that aneurism may exist where there is integrity of the walls. Amongst those holding these views may be cited the names of Sabatier, Nägele, Ackermann, Breschet, Boyer, Dubois, Dupuytren, and Lisfranc, who arrived at their conclusions not from theory, but actual dissection. We can readily imagine that an artery may assume a disease by which it shall lose its natural elasticity, and become softened and expanded; if, however, this dilatation should progress to any considerable extent, the inner tunics will invariably give way. When these tumours are simple dilatations, they are then soft, and if externally situated, can upon pressure be emptied of their contents; but when the inner coats divide, fibrous lamellæ are deposited, at the first but to an inconsiderable extent at the inequalities formed by their corrugation, then increasing, and thus by an accumulation of fibrous deposition, constantly becoming augmented, the tumour acquires a resistant consistency, which constitutes the second stage. It has been questioned by certain authors whether we can with strict propriety term that condition of the vessel—simple expansion of calibre, or even unequal distention of the walls, so long as their entirety continues—aneurism, because the lamellæ are not deposited. In this man, as reported, in the earlier stages of the swelling it was soft, and could on pressure be relieved, but when the layers of fibrin began to form, it acquired the resistant characteristics described. The deposition of fibrin, as remarked, never forms so long as the lining membrane is whole, for then none of the fluid passing along the canal can be carried out of the circulation, and it is in this stage of the tumour, when organizable matters are deposited in its cavity, that sometimes nature, by totally filling up the dilated sac, effects her own cure. When, however, an aneurism is in the large vessels, near the heart, the impulsion of blood is too great, and the current too much agitated, to allow the requisite quiescence for organization to proceed, and complete solidity result. The external coat, so called, is on account of its cellular filamentous texture, far more distensible than the others, and thus it forms an expanding basement to the fibrinous lamellæ as the depositions increase, otherwise aneurismal tumours would attain but an inconsiderable size

before their contents were freely poured out, and, of course, if internally situated beyond the surgeon's reach, death would ensue.

On a review of this case, some facts worthy of notice present themselves. In the first place a lesson is supplied that we can never be too precise and careful in our examinations of disease. Here was an affection of the gravest character, considered and treated as mere rheumatism; the man had been allowed to prosecute his work, which of course, by exciting the circulation, would tend to the aggravation of his affection; the blisters and plasters by which he was treated, were manifestly mis-directed applications.

All writers agree that males are more subject to aneurisms than females; indeed in a table drawn up by Hodgson, out of a totality of 63 cases, 56 were males and but 7 females! These were all examples of spontaneous aneurism. The experience of Sir Astley Cooper, Mr. Guthrie, Lisfranc, and others, bears testimony to the same. In accounting for this, it would be less correct to attribute it to congenital proclivity or natural tendency, than to the operation of causes, incident to the habits and kind of life in males. The greater exertions—more violent exercise—the many causes of excitement to which men are in various manners exposed—the very potent predisponent, intemperance, in which they so often indulge,—all generally tend to render prevalent this disease, more in the one sex than in the other.

Aneurisms, when they do appear, generally come on at an earlier period in life than in this man. Out of 120 cases given by Lisfranc, 108 were before the age of 55, and that author has shewn that from 30 to 35 is the period at which the greatest liability to their occurrence exists. When we reflect upon this fact, it seems a probable one, because at that age the vascular function is carried on with great power and force; in the meridian of life, great physical exertions are often and willingly performed, and because at that time there is often a plethoric condition, and then all those various causes of vascular excitement are in constant operation.

The larger vessels are more prone to the affection than the smaller, because the impulsion of the column of blood is more forcible, the nearer they are situated to the heart, just as a body is propelled with more force and celerity when it is first thrown into motion, than when it is becoming quiescent from the influence of resisting media, (a law which similarly obtains relative to sound,) because the walls of the larger vessels are not thick in proportion to their calibre—that is, when comparing them with the smaller vessels, and because in the larger vessels, especially the thoracic, there are more curvatures.

The stethoscopic indications were very distinct, and in the examinations of these tumours auscultation should never be omitted, because aneurisms have

existed when not suspected; and conversely, tumours which have received impulsations from large adjacent vessels, have been sometimes wrongly considered aneurism. Each systolic action of the heart distends the tumour, synchronous with the arterial diastole, and there is then impulsion on the walls of the tumour, which impulsion gives rise to the percussion-sound. Immediately after the percussion-sound, follows a slight thrill, termed *fremissement*, the termination of which is synchronous with the arterial systole, and at the commencement of the ventricular diastole. M. Gendrin says there are, in the aneurisms of large arteries, two impulsive shocks—the one by impulsion against the parietes, the other following the retraction of the tumour and corresponding to the arterial systole. In tumours, not aneurismal, there are not two impulsions because the impulsive percussion, caused by the termination of the retractive action of the sac, cannot exist except in true aneurisms; where the impulsion is but a transmission from the pulsation of large adjacent vessel, there is only that isochronous with the diastolic arterial action. *Fremissement* and the second impulsive percussion are always distinct in the earlier stage of the swelling, and when the tumour has for some time existed, they are in a great measure or wholly lost, this being dependent upon the increase of fibrous deposition and infiltration of serum into the subcutaneous cellular tissue, and thus preventing the elastic contractions of the sac, and rendering the thrill less distinctly transmissible. The orifice* forming the communication between the sac and the vessel, is for the most part rough and irregular, and, at the arterial edges, are often found filamentous or pedunculated attachments; hence, from these bodies and the unevenness of the opening, the fluid in its ingress and egress produces vibratory sounds, exactly as we know this to be the case where there is morbid roughening or contraction at the auriculo-ventricular orifice, impairing the smooth transit of the column of fluid—hence, as noticed in the case, auscultation discovered a distinct bruit. If the opening between the arterial trunk and tumour is small, true synchronism between the aneurismal and arterial retractions cannot exist, owing to the tumour not momentarily becoming emptied of its contents. Attention to these physical signs, which are so pathognomonic of aneurism, will enable us to form a decisive diagnosis.

The increase of pulsation which there was in the

* Valvular vegetations have been known to produce sometimes loud and very extraordinary sounds. I recollect one of the Edinburgh Anatomical Lecturers mentioning an instance of this kind, in the person of a man, who some years ago was a patient in the hospital. The noise made by each ventricular contraction was a clear and distinct "cooing," and could be heard at two or three yards distance. The other inmates of the ward were much amused at such strange internal sounds, and they gave to him the name of the "cooing-man." After death valvular vegetations were discovered. Hope and other writers on the heart cite like instances.

right carotid, might of course have been anticipated from the extension of the disease to the juncture at the arteria innominata, thus giving rise to obstructed circulation in that vessel, because in all cases where there is considerable disease in the subclavian, and as in this instance, in which the pulsations were felt in an increased degree close under the sterno-clavicular articulation, it is fair to infer that the inferior orifice of the carotid branch would in some degree be occluded.

An œdematous condition of the shoulder could not otherwise than succeed the great impediment given to the return of venous blood, by perversion and distortion of the subclavian vein,—the numbness, declension of temperature, swelling and lividity of the hand, are most probable results. The complete cessation of the radial pulse is an indication of subclavian, as it is also of innominate aneurism; but in aneurism of the arch this is not the case. Mr. Barron, who gives a case of aneurism of the arteria innominata, mentions this fact:—"The pulse," says the relator of the case, "cannot be felt at the right wrist, nor can any pulsation be detected in the right brachial or subclavian arteries." It is often not very easy to decide, whether an aneurism be in the arch or in the innominata; when the radial artery ceases to beat we are led to conclude that it is the latter. In this man there were no bronchitic nor pneumonic attacks; hence, it is fair to presume the innominata was not enlarged, because when that vessel becomes tumid there is pressure upon the right bronchus, which gives rise to the diseases mentioned. Two or three weeks ago Professor Walshe shewed me a case of aneurism of the arch of the aorta then under his care in the North London Hospital, which I auscultated and carefully examined, and on the day on which these remarks were written, I had an opportunity of inspecting the morbid parts, the patient having died very suddenly some days ago. The man, during the latter part of his illness, had considerable dyspnoea, which morbid appearances fully accounted for. The lower part of the trachea was very obviously flattened, so much so, that the elastic fibrous membrane at the posterior or vertebral aspect of the rings, which joins their extremities, was obliterated by the continuous lateral pressure on the trachea; but the bronchi were natural, which would not have been the case on the right side if the innominata had been enlarged. Speaking of this man, (the hospital case,) it may be here mentioned, that during life, slight prominence was perceptible at the cartilages of the second and third ribs, and on inspection, the clavicle and first rib presented ulcerous erosions, of course consequent upon pressure exerted by the aneurism. Boyer and other authors allude to the destruction of bone by these tumours, and I have great reason to suspect that in the case of Armstrong, very extensive decay of the clavicle and first rib had taken place,

because several weeks previous to his death, manipulation gave the feeling as if a roughened end of this bone were left by the process of ulcerative destruction, at the extremity of which it could be traced from the sternal end till lost in the tumour; it felt spiculated and abrupt.

Hospital Reports.

WEST NORFOLK AND LYNN HOSPITAL.

COMPLICATED SURGICAL INJURIES UNDER THE CARE OF CHARLES COTTON, ESQ., M.D., F.R.C.S., &c.

GUN-SHOT WOUNDS OF THE HEAD AND WRIST; AMPUTATION OF FORE-ARM: DEATH ON THE FIFTY-SEVENTH DAY FROM THE SECONDARY EFFECTS OF LESION OF THE BRAIN.

Edward Bulman, 17 years old, admitted Sunday evening, May 7th, 1848.* Brought a distance of eight miles to the hospital. Reported to have left his employment as "crow-keeper" for the purpose of shooting rabbits, and whilst drawing his gun with the muzzle towards him, to have accidentally discharged it; the accident occurred late in the afternoon. The charge had perforated the right wrist, lacerating and shattering the bones and soft parts, and also inflicted a large ugly wound in the left fronto-temporal region. The external orbit and temporal arch were found fractured and comminuted; the left eye started from its socket; the lids pierced with shot, swollen, and ecchymosed; the cheeks and nose grazed and disfigured; and the right eye suffused and closed. The boy was in a confused comatose state; the surface of the body warm, and the pulse not much enfeebled. Amputation of the fore-arm being approved in consultation, Mr. Cotton proceeded at once by flap method to remove the limb at its centre, making the posterior semi-circular incision by cutting from without towards the bones, and the anterior by transfixion. The patient was much roused by the operation, and on a momentary difficulty being experienced in securing the interosseous artery, lustily begged it might soon be completed. The face, and wound of the temple, were afterwards sponged and cleansed, the hair removed, and the head directed to be kept cool by frequently renewed applications of cold water.

May 8th. Comatose and stupid; pulse slow; passed a tolerably quiet night; unconsciously elevates and moves about the stump, and cannot be made to keep it on the pillow without constant attention of the nurse. Give only cold water, should anything be desired.

9th. Somnolent and heavy, but replies to questions on being roused.

* A man was admitted into the hospital under Mr. Cotton, on Sunday evening, December, 4th, 1844, with almost precisely the same injuries from a gun-shot wound, for which the arm was amputated, and the left eye perished. Recovered without a single disagreeable symptom.