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ORIGINAL COMMUNICATIONS.

XXXVI.—*Memoranda connected with certain Surgical subjects.* By E. W. C. KINGDOM, M.D., Edin., L.R.C.S.E, Assist.-Surg., R.C.R.

In committing the following remarks to paper, I lay no claim to originality, as they are chiefly notes taken in the Surgical Ward of the Royal Infirmary, Edinburgh, illustrative of Professor Syme's practice, and embodying, in a concise form, some of his original ideas, not probably to be found in his work. Under the impression that they may be interesting to some of the junior members of the profession, I lay them before the public.

1. *General Remarks upon Fractures* :—

There are erroneous impressions regarding the pathology of fractures, 1st, That a fracture is always followed by inflammation. This is a very prevalent idea, and has led to the application of leeches where there was no need for them, and, consequently, to delay, in applying proper retentive apparatus. Fractures are attended by *swelling* and *pain*, and hence inflammation is *supposed* to be present, but there is neither *redness* nor *heat*, and we have merely *irritation*, far short of inflammatory action. Now, these symptoms have been erroneously treated by soothing applications, &c., but as they depend upon the misplacement of a bone, or bones, the cause is merely to be removed, *i.e.*, the fracture reduced. Should inflammation, however, have supervened, we should nevertheless, set the bones without waiting for its subsidence. The most soothing measure is the adjustment. Moreover, as the reparative process commences immediately, the more delay the more difficulty in proper adaptation.

Means of keeping parts "in situ" :—

In no case is it sufficient to trust to mere position, but measures must always be resorted to, for mechanical support. All complicated apparatus is to be avoided. There are three methods of treating fractures :

1. By bandage alone.
2. Rollers and single splint.
3. Two or more splints, and roller.

In the first way, are treated, 1st. *Fracture of the lower jaw*.—Here the use of a cork between the teeth is unnecessary. 2nd. *Fracture of the clavicle*.—The figure of eight bandage is all that is required. The pad in the axilla, so commonly recommended, should not be used, as before it can act as a fulcrum, with any beneficial effect, the pain it causes by pressure is intolerable. 3. *Fracture of the neck of the humerus*. Here we require a pad in the axilla and bandage. 4. *Fracture of condyles of humerus*. Arm to be put at right angles, with figure of 8 bandage.

Fractures of Metatarsal Bones, Pelvis and Ribs, firm bandages.

Fractures of Phalanges.—Fingers to be firmly bound over a ball of cotton or firm padding placed in palm of the hand. These are the fractures treated under its method. It will be observed that Mr. S. differs from the generality of surgeons in three particulars, *viz.* omitting the use of the cork in the treatment of fracture of the lower jaw, the pad, in that of the clavicle, and the ball of cotton in the palm in cases of phalangeal fracture instead of the small splints recommended by Liston.

In the second way, are treated fractures of the olecranon, patella, fibula, femur, and trochanter thereof. With regard to simple fracture of the fibula, I confess I see no need for a splint at all; the tibia being intact, together with a bandage should be sufficient.

In the third way.—Fractures of the shafts, of the humerus, and the femur of the radius and ulna, and of the tibia and fibula. Out of the 16 different fractures, it will be said that eight are treated under the first heading, and a corresponding number under the second and third method. When we come to think of some which have been omitted, as of the acromion and scapula, we at once perceive that splints are the exception, and not the rule, in the treatment of the subject under consideration. The acrimony existing among writers upon present topic, is, as Mr. S. justly remarks, probably owing to want of knowledge, hence they are tardily open to conviction, but I take it, that the worthy Professor himself is not among the least of the belligerents.

From fractures we pass naturally to a very disagreeable circumstance which occasionally occurs owing to old age, debility, cancerous cachexy, pregnancy, disturbance of fracture, &c., *viz.* the formation of a *false joint*. The pathology of this affection, according to Drutt, Liston, Ferguson and others, is, that owing to some of the above mentioned causes, the plastic exudation thrown out after a fracture, fall short of the intentions of nature, and a ligamentous union or a false joint is formed, instead of in the first place, a provisional splint to be absorbed upon true bony union taking place. This affection is most common in the femur

and humerus. Further, surgical authors generally agree that the fractured end of the bone or bones, are ultimately rounded off, and enclosed in a proper capsule. Liston (vide Pract. Surg. 4th edition, page 98,) gives three positions which the fractured extremities may take—the broken ends may be separated from each other and rounded off; others may be in contact and surrounded by a cyst formed by condensations of the cellular tissue; or they may overlap considerably and lie side by side, either in close apposition or with some substance interposed." The treatment of this affection is too well known to require any notice here. I may merely briefly enumerate the various methods which surgery has put into requisition, rest, irritation, by friction of the extremities, setons, sawing off the ends of the bones, rasping them, cauterizing them, and in fact putting the unhappy sufferer to all kinds of torture. If active means are to be adopted at all, probably the seton is the least objectionable. But here again a great error is often committed, viz.: a misconception as to the desideratum, to be obtained by the use of the above means. As Mr. Liston remarks (op. cit.) "The plan I have pursued has been to pull about the parts a good deal at first, to introduce a larger, and larger cord, and to remove the foreign body at the end of a few days—eight or ten—so soon in fact, as a considerable degree of excited action has arisen in the bone and periosteum, and before it began to decline; the limb is then to be put up with great care, and every chance of the slightest motion guarded against. The object in passing a seton is assuredly not to promote and maintain discharge, which is prejudicial to, and which when the result of accident often enough interferes with the union and gives rise to the necessity of such operations as that now under consideration." Mr. Liston then gives a very interesting case of perfect failure of an attempt to induce bony union, although all means and appliances were tried for a period of three years. Among the last was the seton, but the cord was actually only changed twice in the course of 13 months. I have very cursorily noticed the treatment of false joint, merely wishing shortly to run over the chief views of authors before contrasting them with Mr. Symes' ideas upon the subject. He says, "most writers think, that in false joint, the ends of the bones are rounded off, and enclosed in a proper capsule." This, according to Mr. S., is not the case, as upon careful examination the ends of the bones are found to be merely united by cartilage. The same authority considers the various practices generally employed quite unjustifiable, and all he recommends is *perfect rest*, which is to be commanded by the proper application of a splint well padded. The ends of the splint should extend beyond the neighboring articulations. The time required for firm union is, of course, considera-

ble. Mr. Symes' plan must appear to every one to be exceedingly simple, as likewise his pathology of the parts. There being no synovial membrane, to prevent the gradual deposit of osseous matter, rest should be sufficient, without operative interference. Who may be right, or who may be wrong, I don't pretend to say, but certainly I have seen several cases of the affection in question cured by rest alone. One would naturally be disposed to think that the length of time a limb has to be kept perfectly quiet to ensure success, would interfere with the subsequent mobility of the neighbouring articulations. This, however, was not the case in the patients I saw suffering under this affection. These remarks are cursorily committed to paper, not with a view of entering upon any defence of Mr. Symes' views, but merely giving them, as differing in some points from the general opinions of surgeons.

ART. XXXVII.—*De la fréquence des affections calculieuses.* Par M. le Docteur M. P. F. VINCENT, Malboie.

MESSIEURS,—J'ai lu dans le numéro 9 de votre inestimable journal médical pour janvier une réfutation de M. le professeur Hall, contre un article du Dr. Horace Nelson, éditeur de l'*American Lancet*, au sujet de la fréquence des affections calculieuses dans le district de Montréal. Il est certainement moi que le Dr. Robert Nelson, quoique habile lithotomiste, ait pu faire l'opération de la taille sur plus de cent cas, durant une période de vingt années, car je connais d'anciens et de très habiles chirurgiens dans le district de Québec qui nous disent que ces désordres sont assez rares en Canada; d'ailleurs, les témoignages très véridiques d'un grand nombre de célèbres praticiens de Montréal ne nous prouvent-ils pas que M. l'éditeur Nelson se trompe grandement. Soit, Messieurs, que l'influence calculieuses ait prodigieusement diminué depuis cette époque, ou que le neveu de l'oncle ait voulu en imposer à ses confrères du Canada en voulant tout bonnement leur faire avaler ce canard; toujours il est vrai que depuis quatorze ans que je pratique la médecine et la chirurgie dans les populeux comtés de Charlevoix et Chicoutimi je n'ai rencontré qu'un seul cas de calcul urinaire, que je citerai si, Messieurs, vous le jugez digne d'être inscrit dans votre prochain numéro, et propre à intéresser vos nombreux souscripteurs.

Je fus appelé le 10 Novembre, 7 heures, A. M., pour donner mes soins à Madame M. Savard, âgée de 65 ans. A mon arrivée je trouvai la femme presque en délire, souffrant les tortures les plus atroces dans les lombes, la région vésicale et meat urinaire, poëls presque imperceptible, peau froide et une transpiration glaciale, avec efforts continuels de vo-

misements, la vessie très distendue, n'ayant pu passer d'eau depuis 34 heures. L'examen per vaginam me fit sentir un calcul très gros enclavé dans le col de la vessie. Comme le cathétérisme était devenu impossible et que je prévoyais une rupture de l'organe, je décidai la femme à subir à l'instant même l'opération de l'extraction. J'introduisis alors l'indicateur gauche, enduit d'huile d'olive, dans le vagin, et le directeur tout le long de l'urètre que je trouvai raccourci et tuméfié, et l'ayant donné à tenir à une assistante j'incisai avec le bistouri courbe tout l'urètre à environ un demi pouce du col de la vessie ; j'empoignai ensuite le calcul avec une paire de forceps, ayant au préalable eu soin de dilater le sphincter vésical, et par un mouvement de traction de bas en haut et continué, et aidé par les efforts d'expulsions de la patiente je réussis à enlever la concretion. Plus de trois chopines d'urine, mélangé de mucus et de globules sanguin, s'écoulerent au même instant. Le soulagement fut immédiat, et je dois dire que l'opérée ne perdit pendant tout l'opération au plus 3ij de sang. J'envoyai ensuite une injection émolliente dans la vessie afin de diminuer l'irritabilité de l'organe et de laver le vagin, des particules de la pierre qui auraient pu s'en être détachées. J'envoyai un tampon imbibé d'huile d'olive dans tout le vagin ; et laissai la femme dans le meilleur état possible. 11 Novembre.—Inflammation presque nulle, incontinence d'urine, sommeil profond, pouls plus développé que la veille, j'ordonnai ʒj oi. ricines pour combattre la constipation, avec cataplasmes émollients sur les parties externes.

12. Douleurs et inflammation augmentées, je donnai ʒss tinct hyosiani avec vin. ipecac ʒss ter die.

14. Fièvre plus forte, douleurs moindres dans les parties, suppuration établie mais douleurs fortes et lancinantes dans la région vésicale, ordonnai cataplasmes sinapisés sur région hypogastrique qui eussent l'effet d'abatre immédiatement ces douleurs, je prescrivis aussi pulv. ipecac. c. grs. viij. cal. ij.

16. Douleurs et inflammation beaucoup diminuées, pouls assez naturel, appetit bon, j'ordonnai vin de Porte ʒj. et sulp. quinenac, ter die, viande blanche et bouillon.

REMARQUES.—Cette femme qui depuis quinze mois endurait les tortures les plus atroces, se plaignant continuellement de douleurs dans les lombes, la vessie, et l'urètre, ne pouvant retenir ses urines, ou faisant de continuel efforts pour les passer, ne voulut jamais consentir durant cette période de temps à se soumettre à la moindre opération. Elle était devenue d'une faiblesse extrême presque rendue au marasme, avec irritation des bronches accompagnée d'expectoration. Tous ces symptômes ont disparu, et la femme depuis l'opération progresse d'une manière étonnante pour le mieux. Pésanteur du calcul ʒijss., forme triangulaire.

laire, composé de lamelles successivement superposées les uns aux autres avec noyau de mucus concret, couleur blanc-grisâtre et très faible, à surface inégale et rude. L'analyse chimique m'a démontré que cette concrétion urinaire était composée de phosphate-ammoniac-magnésien.

XXXVIII.—*On the change which has occurred in the character and requisite treatment of inflammatory diseases of the Lungs, within the last four or five years, in the Eastern Townships.* By F. D. GILBERT M.R.C.S.L., Hatley, E. T.

In writing as briefly as possible on the above subject, my object is two-fold, viz., to induce communications from other parts of the Province, with a view of eliciting information, as to whether the change I have observed in this locality is general, as well as to endeavour to draw the attention of my younger professional brethren to a subject, I believe, of great importance in the treatment of one of the most frequent and often fatal diseases incidental to this climate.

Twelve or thirteen years ago, when I first arrived in this country, sthenic inflammation of the various tissues of the lungs was, especially during the colder months of the year, I believe the most prevalent of any dangerous disease in my practice, and in no part of the world had I ever seen active antiphlogistic treatment, generally, better borne or attended with greater success in the treatment of these diseases; discrimination being, of course, had to the difference in the length to which this was carried between bronchitis and inflammation of the other tissues.

Typhoid fever was then a perfectly unknown disease in this vicinity, but about eight years ago, I believe in the summer of 1847, a few scattered cases occurred, all evidently imported from Montreal; these gradually increased in number until, I believe, I can safely assert there has never been a time for the last four years, that I have not had one or many more cases under treatment; and I am under the impression that it is owing to the peculiar change in the state of the human system, (probably induced by some atmospheric influence having rendered this disease heretofore unknown, a now very prevalent disease,) which is the cause of alteration I have noticed in the diseases of the lungs. In January, 1850, I left Canada and was absent two years; previous to that time I had not observed any difference in the character of lung diseases, excepting, of course, occasional instances of disease as a concomitant or sequelæ of typhoid fever. Immediately on my return, however, I discovered that cases of (apparent^y) sthenic pleuropneumonia

did not bear active antiphlogistic measures with the same tolerance as heretofore, but that on the contrary asthenia was readily induced, and a stimulant course of treatment required.

Of course some instances of this kind had occurred in my practice both here and in England formerly, so that for, perhaps, the first 12 or 15 cases (though after the first two or three cases I was more guarded in my treatment,) though, thinking it singular I should have so many cases of this kind in rapid succession, I did not suppose any permanent change in the character of these diseases had occurred.

I am now, however, perfectly satisfied from the result of a vast number of cases, scattered over a large area (as my practice is) of fully 20 miles square, with a population of some 5 or 6 thousand, and extending over a space of upwards of four years, that a very material change has occurred in the character and consequent requisite treatment of this important class of diseases. In fact I now certainly consider a case of true sthenic pleuropneumonia or bronchitis (the latter, however, the most common), more the exception than the rule in my practice.

Should what I have observed, and am positive of, as an established fact in my practice prove to exist generally throughout the Province, I would beg to call the earnest attention of my confreres to the able remarks uttered, years ago, by "the Stokes" of Dublin, in reference to the lung complications of typhus, the purport of which was that we should always bear in mind, that though we may, and often do, find all the physical signs of inflammation of the various tissues of the lungs in cases of typhus, yet that we should be in grave error did we attempt to treat them as such cases, and that, in fact, though we have even dullness of percussion, pectoriloquy, crepitant rale, and dyspnoea; yet there is absolutely no inflammatory action as the result of various treatment evidenced, particularly in the rapidity with which excessive dullness (which if caused by inflammation, would form hepatization, and require a long time for its disappearance,) would disappear under generous diet and the free administration of stimulants internal and external.

The sum of my observation on the above would be to suggest the propriety in every case of apparent inflammation of the lungs, (especially pleuropneumonia or pneumonia) of using more than ordinary care in ascertaining the history of the case, how long it has been supervening, the state of the tongue, whether there is unusual dullness in an unusually short time after the invasion of disease, the hardness or otherwise of the pulse, whether much headache, and the previous state of the liver, stomach and bowels. And even if all these symptoms indicate sthenic disease, after the first sufficient venesection with the administra-

tion of calomel and antimony, &c., watch the patient closely, and if *asthenina* appears at all likely to supervene, lose no time in throwing away the calomel and antimony and administer equill senega or sulphate of zinc (the latter with decoctum senega I prefer), and apply spt terebinthinæ with hot water in small and often repeated patches over the whole thorax, with a tolerable diet and pretty free use of brandy, Holland gin, or Port wine.

ART. XXXIX.—*On Intestinal Injuries, (continued.)*—By W. MARSDEN M.D., Governor of the College of Physicians and Surgeons, C. E.; Fellow Med. Soc., London; Fellow Medico-Bot. Soc. London, &c., &c., &c.

The following case, which originated in that too frequent cause of discord, religious controversy, formed the subject of a judicial investigation. Joseph Douglas was arraigned and tried before the Honorable Chief Justice Sewell and Mr. Justice Panet, on Friday the 28th of September, 1832, on a charge of "assault with intent to murder" one Daniel O'Leary, and having been found guilty of common assault only, without intent to murder; was, on the following day, sentenced to be committed to the Common Jail of the district for the space of six calendar months, and at the expiration of that period to give security to keep the peace for five years, himself in one hundred pounds and two sureties in fifty pounds each.

Sunday, August 5, 1832.—Was called to Beauport to visit a labourer in the employ of G. H. Ryland, Esq., who had been stabbed in several places, with a clasp knife, in a quarrel with another man. Arrived at half-past nine P. M., and found Daniel O'Leary, at 24, in a cottage attached to the Manor House of Beauport. He was a powerful, athletic man, about 5 feet 10 inches high. He was lying on his back, with the knees drawn up, and a portion of intestine several inches in length protruding from the abdomen.

On examination found nine wounds or stabs, in different parts of the chest and abdomen. They were of the same character and all of about the same extent, $\frac{1}{2}$ of an inch, having been inflicted with a clasp knife. Of these wounds four were near and around the nipple of the left breast, one about two inches above the right nipple, and one of almost an inch in depth, and three quarters of an inch in length, penetrating obliquely downwards and outwards between the fifth and sixth ribs; two on the left scapula by which bone they had been arrested, and, the last and most serious, almost two inches below the umbilicus, and an

inch to the left of the *linea alba*; through which a portion of the ileum of several inches in length protruded, and was there strangulated, and had been so for about two hours. The intestine was turgid and was divided to the extent of about 5-16ths of an inch, and a small quantity of liquid fecal matter had oozed out of it. As a considerable quantity of blood had been lost from the wounds, reaction was not completely restored when I arrived, and as John Racey, Esq., J.P., was on the spot, I caused an affidavit of the facts of the case to be taken.

Having relaxed the abdominal muscles as far as practicable, and finding it impossible to return the intestine within the abdominal cavity, without dilating the wounds; I proceeded to do so with a probe-pointed bistoury, and then, returning it carefully, the wounded part last, closed the wound in the abdominal parietes, by a continuous suture. Having dressed the other wounds, I ordered pounded ice to be constantly applied to the abdomen. This, with other appropriate specifics were furnished throughout the case by Mrs. Hammaud, the benevolent occupant of the Manor-House, to whose kind and considerate attention the unfortunate man was in no small degree indebted for his restoration to health.

Monday, August 6, 11½ A.M.—Passed a restless night. Pulse hard, wiry and frequent, tongue white, skin hot and dry, thirst, pain in the abdomen. Continue the pounded ice. Fifteen grains of carbonate of soda, and twelve grains of tartaric acid in four ounces of water, every four hours.

Tuesday, Aug. 7, 2 P.M.—Had passed a better night and slept a few hours. Commenced vomiting about mid-day. Great jactitation since. Pulse small and hard, skin hot and dry, tongue furred and dry. Administered an enema of a pint of warm water, which soon brought away a quantity of dark feces with flatus. Ordered two grains of calomel, with the third of a grain of opium, every six hours, with weak lemonade, in small quantity, as a beverage.

Wednesday, Aug. 8, 2½ P.M.—Had passed a tolerably good night; bowels moved in the morning once; pulse full and compressible, skin warm and moist, tongue brown but moist, slight tenderness in the abdomen. Continue calomel and opium with soda powders.

Friday, Aug. 10, 11 A.M.—Received a favorable account of the past two days. No vomiting since Tuesday. Slept tolerably well at night. Bowels open once a day, pulse full and regular, skin moist, tongue moist and clean at the edges. Discontinue medicine.

Sunday, Aug. 12, 4 P.M.—Steadily improving in every respect. Appetite increasing, bowels regular. No pain in abdomen. Discontinued ice. From this time until Thursday the 23rd of August, when he was

removed to the Hotel Dieu Hospital, convalescent, I visited him every alternate day, but nothing occurred worthy of note.

The only peculiarity in the treatment of this case was the continued use of cold applications to the abdomen. These I adopted with a view of reducing and keeping down local inflammatory action, and in the hope of diminishing the peristaltic action of the intestines; knowing that coagulable lymph would nevertheless be effused rapidly and freely enough for the purposes of reparation.

Some persons may question the propriety of returning the divided intestine without a suture, notwithstanding the result; as 'the opinions regarding the treatment of an intestine wounded and at the same time protruded are very different.'† "In slight stabs of the intestine the opening of the wound is always closed by the protrusion of the inner coat. In longitudinal wounds the edge of the wound always turns out, and from the contraction of the longitudinal and transverse fibres of the gut, the wound assumes an oblong form. In transverse wounds the edges are not so widely separated, but they are more thickly turned out." Travers says:‡ "if a gut be punctured the elasticity of the *peritoneum*, and the contraction of the muscular fibres open the wound, and the villous or mucous coat forms a sort of hernial protrusion, and obliterates the aperture. If an incised wound is made, the edges are drawn asunder and reverted, so that the mucous coat is elevated in the form of a fleshy lip." He also gives the following excellent description§ "of the reparation by artificial connexion of the divided parts" of a wounded intestine:—"It commenced with the agglutination of the contiguous mucous surfaces, probably by the exudation of a fluid similar to that which glues together the sides of a recent flesh wound when supported in contact. The adhesive inflammation supervenes and binds down the reverted edges of the peritoneal coat from the whole circumference of which a layer of coagulable lymph is effused, so as to envelope the wounded bowel." The lymph thus deposited becomes rapidly organized|| and the quantity effused is abundant as was proved in Corrigan's case, at least a pint having been found in the cavity of the abdomen.

Among the advocates of a suture to the wounded intestine, Joubert¶ "employs the stitch, by which the edges of the wound are so brought together that the serous surfaces touch, if the wound be above three

* South's Chelins. American Ed., vol. 1, page 509.

† Idem. Page 508.

‡ Travers on Intestinal Injuries, page 85.

§ Ut supra, page 128.

|| Cooper and Green's Manual of Surgery, page 12.

¶ Mémoires sur les plaies du canal intestinal. Paris, 1827.

lines long," and Travers strongly recommends a similar practice. I am however of opinion, notwithstanding these high authorities, that too much importance is attracted to the suture; when we consider the anatomical structure and tendency of the parts to closure as above shewn, the rapid effusion of the lymph, and equally rapid organisation, if judicious efforts to diminish the peristaltic action be used, union will, and must follow. Under all these circumstances I think with Dr. Frauent, that fœcal effusion, in the case of Corrigan, took place at the moment of receiving the injury; otherwise, it was not of so extensive a character as to have precluded the probability of its closure by adhesion.

Quebec, 28th February, 1856.

ART. XL.—*Observations on the treatment of Aneurism of the Arteria Innominata, by ligature of the right common Carotid Artery, with a Case.* By WM. WRIGHT, M.D., L.R.C.S.E., Professor of Materia Medica, McGill University, &c.

(Continued from page 420.)

The characters that chiefly distinguish the preceding case from its fellows are as follows:—the situation of the external tumor—the resemblance of the latter to an abscess—the modification of its direct symptoms—the initiatory redness—the inadequacy of the acoustic signs derived from the chest—the slightness of the remote symptoms—the anatomical difficulties of the operation—the external opening of the aneurism—the fistula to which it led—the symptoms of deranged cerebral circulation as witnessed in hemiplegia, ushered in by pseudo-coma, and varied before death by intercurrent stupor and vigillium—and, lastly, the subsequent discovery of abscesses in the brain, and of a peculiarly constructed aneurism. Each of these calls for a few remarks.

I. The situation of the tumor appears peculiar when contrasted with that of others, before quoted, in which this circumstance is precisely stated. Of 8 cases of innominatal aneurism treated by carotid deligation: in five it was directly above the right sterno-clavicular articulation, or inner extremity of the clavicle, and behind the lower end of the sterno-mastoid muscle; when large it projected so as to be visible on both the tracheal and outer borders of the muscle. In one it proceeded outward about one-third along the right clavicle. In another it was still more external, and was seated over the middle of this bone. And in the last it is described as "immediately above the sternum, bounded laterally by the trachea and tracheal margin of the sterno-cleido-mastoid muscle." All these exhibit a lateral position. In the case I have described, how-

over, the situation was mesian in the episternal cervical pit. But while this situation was exceptional to that seen in cases similarly treated, it accords with what has been observed in other cases of innominal aneurism, which have either not been operated upon, or have been otherwise treated; for if their records be examined, examples will be met with like the one in question. This central situation is occasionally taken up by aneurism of the aorta, either of the arch or ascending portion. Dr. V. Mott, in his remarks upon aneurisms, (*Velpeau's Operative Surgery*, vol. 1, p. 278,) says:—"When an aneurismal tumor shows itself above the upper bone of the sternum, it happens as often that it proceeds from the aorta as from the innominata." Blakiston (*Diseases of the Chest*, p. 135) describes a case of sacculated aneurism that sprang from the arch of the aorta, and caused a suprasternal tumor, on referring to it, the reader will remark that the latter bears many points of resemblance to the one in the case above detailed. It is an important matter to be able to distinguish whether aneurism pointing in this part arise from the innominata or aorta; as if it be the former, operative interference may be justifiable, while if it be the latter, such procedure is inadmissible. In some cases this diagnosis cannot be made during life, but in others, of a less obscure kind, a correct conclusion may be formed—and perhaps in future cases the following differential arrangement may be found useful. It refers merely to the distinction of the tumor in the episternal cervical pit, and not to the diagnosis of the aneurisms generally.

INNOMINATAL.

Most frequent.
Development more rapid.
Unilateral.
Inclined to the right.
Proceeds from the right to the mesian line.
Attachment expanded.
Basis dextrolateral.
Occupies whole length of arch segment of innominata.
Signs of aortic aneurism absent or doubtful.
Dullness greatest about the sterno-clavicular joint.
The remote symptoms of aneurism confined to, or chiefly observed in, the right side of the body.

AORTIC.

Less common.
Formation more gradual.
Symmetrical.
Equi-distant from either side.
Ascends mesianly.
Attachment pedunculated.
Basis inferior.
From a part of the arch between the innominata and left carotid.
Signs of aortic aneurism invariable and evident.
Dullness greatest over centre of manubrium.

The remote symptoms of aneurism occur at least in the first instance on the left side.

It is expected that an exception may be met with to one or more of these distinctions, for they are only intended, like other diagnoses, to apply to the generality of cases. Besides the above vessels (innominal and aortic) it is just possible, that through great rarity, an aneurism might be produced in a similar situation, either by a lateral diversion of the root of the right common carotid, or by the thyroid, middle or inferior, artery communicating with the cavity of an abscess. Such cases would be characterized by their own individual features, as the higher locality of the tumor, &c., as well as by an absence of the positive characters of innominal aneurism.

II. The likeness of the superficial swelling to an abscess was striking, and it is, therefore, not strange the patient should have mistaken it for one. In other cases this resemblance has been so strong, as even to have deceived surgeons themselves. Mr. Norris (*op. cit.*) has published two such instances; in which the sac was incised, one of which happened to the late Mr. Liston. This error, for the most part, only happens where the more prominent symptoms of aneurism are absent: such as equable expansion and declination of the sac, synchronously with the systole and diastole of the heart; collapse of the sac, upon pressure of the artery on its cardiac side; emptying the sac by direct manipulation; inability to remove pulsation, by displacement, &c.; should cardinal signs like these be absent then, indeed, a wrong diagnosis may be venial. While, however, it is true that an aneurism may be considered to be an abscess, the converse does not necessarily follow, as is unconditionally stated in some hand-books, (*e.g.*, Erichsen,) and I believe it may be asserted that *an abscess cannot be mistaken for an aneurism.*—For that could only occur when an abscess possessed the most distinctive of the signs of aneurism as those just specified; while experience shows that such attributes are never present. An abscess may pulsate and thus simulate an aneurism, but this is merely a suggestive sign of aneurism, and unless accompanied by the cardinal signs is never considered to be conclusive in its indication. An abscess is more likely to be mistaken for an aneurism in its earlier stage than when fully matured. Lancisi (*De aneurysmatibus*, 1728,) bears witness to the correctness of this proposition in the following decisive words:—“For whatever pulsatile power an abscess may be supposed to possess, yet its pulsation only lasts until pus is generated when it ceases.” Owing probably to the hard fibrinous exudation of the first period being capable of exercising a degree and kind of pressure upon contiguous vessels, which the purulent secretion of the latter is unable to accomplish. Occasionally, however, a few exceptions are observed where an abscess in the fluid condition does pulsate, but these are so uncomplicated as not to embarrass the diagnosis. And from them the practical conclusion follows; that swellings in the neck, though soft, liquid, fluctuating and pulsating, if deficient in every other mark of aneurism, may be safely treated as abscesses.

III. Some of the direct signs of aneurism, or those proceeding immediately from the sac, were deficient; as the absence of thrill and indistinctness of bruit. This peculiarity is to be ascribed to the nature of the aneurism; it was of the species known as sacculated or false, and still more appropriately called by Petit, aneurism by effusion. the latter

appellation implying that, the blood escapes or is effused from the artery to which it returns after having circulated through an intermediate sac. In every such aneurism, according to this eminent surgeon, who wrote in 1736, thrill is rarely perceptible and bruit is seldom, or else but indistinctly perceived. He also mentions another distinguishing feature, that further identifies the above case with this class—it is that in aneurism by effusion, the enveloping “integument assumes a brownish or leaden tint, as if there was a bruise.” These observations, also, go to show that Petit, more than 100 years ago, was positively in advance of the knowledge entertained on his subject at the present day. Contrast, for example, with his clear observations the remarks on diagnosis between true and false aneurisms, as stated by Chelius, and which are so inapplicable as to have drawn forth the comments of even his editor, Mr. South. The discoloration last noticed generally supervenes when the swelling becomes superficial, and the surface takes on a species of inflammatory action.

IV. The redness of the skin that preceded the swelling may be explained by assuming that when the arterial dilatation first gave way, it left a very minute opening and that through this chink a little blood escaped, and was impelled upwards into the sub-integumental tissue, where, upon becoming extravasated, it stained the superimposed skin; being produced in short, after the manner of an ordinary bruise. Swelling succeeded gradually, because the tense, unyielding nature of the thoracic fascia had to be overcome; and this obstacle only yielded to frequent repetitions of the systolic impulses, that had caused rupture. When at length it yielded, a diverticulum of blood was forced with sufficient momentum to protrude forward the episternal cervical pit. This is the way in which some cases of false aneurism are developed at the bend of the elbow after venesection. And it is also the origin of some cases of dissecting aneurisms, as is thus described in Jones and Sieveking's *Pathological Anatomy*:—“We sometimes meet with small ecchymoses under the lining membrane of the aorta in the dead body, which indicate the commencement of this form of aneurism. A minute, and, sometimes, imperceptible fissure in the inner coat allows of the permeation of a small quantity of blood, and the first step having occurred a succession of similar deposits may soon cause a greater accumulation, and necessarily a coincident separation of the coats.”

V. The acoustic signs did not indicate, correctly, the existent state of the heart and large vessels. The principal abnormality heard was a strong pulsation, which was double or formed of two strokes, and denoted by two sounds. These, in special character, resembled the cardiac

sounds, but differed from them in being more superficial and more sonorous ; they appeared to be loudest about the right superior angle of the sternum, and grew progressively fainter as they were examined at remoter spots. So that, including the heart's region, there were present in the chest *two distinct centres of pulsation*, which Dr. Stokes has informed us, is the simplest expression of physical diagnosis in aneurism. The distinction between these aneurismal sounds was not very obvious till after the operation, when they exactly simulated the *bruit de choc* of some French auscultators,—the greater clearness at this period may be referred to the improved conducting power of the sac after fibrillation of its blood had occurred. With the pulsation there was no distinct *bruit de soufflet*. And thus the general rule in thoracic aneurism was preserved ; but an exception to it might have been expected, for the tumor was compressed, posteriorly, by the trachea which had left its mark upon it, and, anteriorly, in a less degree by the clavicle and sternum. Circumstances which, in the opinion of some Pathologists, would be causes more than competent to educe murmur. Over the point corresponding to the passage of blood, from the sac through the left subclavian, there was, however, an approximation to a bruit. The above signs, at most, only denoted a thoracic aneurism. And did not imply its precise locality, as, for aught they shewed, this may have been the ascending aorta, or the arch, or the innominate, &c. ; they did not indicate whether there was only one, or more than one, aneurism ;—and they were inexpressive of the actual size of the aneurism. Thus substantiating the conclusions of various observers, as Dr. Mott, who contend that stethoscopy cannot declare the true seat of aneurisms about the root of the neck, and Dr. Stokes who has said that an “ extremely weak, almost imperceptible impulse, may attend even a large aneurism of the aorta.” But to some, the signs present may appear still more vague, since they closely simulated those heard in gouty aortitis, permanent patency of the aortic valves, &c. There was a still greater lack of intelligence concerning the state of the heart. The impulse of this organ did not seem abnormal, and yet there was a considerable hypertrophy of the left ventricle ;—the sounds were not accompanied with nor replaced by any bruit, and yet the aortic ostium was inlaid with bony plates and the mitral valve was fibroid in its flaps, as well as calcareous round its base. The latter negation is easily understood, as the report shows, had any murmurs existed, they must have been of the “ obstructive” or direct kind for no regurgitation had taken place. Now of these a diastolic mitral murmur is the rarest of rare sounds ; Laennec knew of no instance, but hypothetically inferred the presence of a bruit, and up to 1848 only

one case has been recorded, and that is by Andry. Systolic aortic murmur is on the contrary of common prevalence; its absence was probably due to the ostium being smooth as the deposits were laminated and plane. And lastly, the roughened aorta did not cause a murmur, thus agreeing with the observations of Hamerjnk of Prague, who doubts whether a bruit will arise from a roughened aorta, although the contrary is usually believed among English and American auscultators.

VI. In comparing the above case with others, the slightness of the remote symptoms is at once evident. In it pressure upon the branches of the cervical plexus produced pains like rheumatism in the right shoulder and along the neck;—instead of, as in others, dull aching pain in the tumor, sharp neuralgia in the arm, side of face and head, shoulder and top of chest. Pressure on the air passages provoked paroxysmal attacks of asthma,—instead of continued dyspnœa: the laryngeal irritation, from pressure on the recurrent laryngeal nerve, was signified by a short persistent cough, scanty mucus sputum, and no change of voice,—instead of dry cough, paroxysmal cough, (*tussis clangosa*), sero-mucus expectoration, laryngeal stridor, and hoarse, husky, or whispering voice. Pressure on the vena innominata caused a tendency to tippet-shaped neck—instead of œdema in the right side of the face and neck, the front of the chest and arm; a varicose state of the cutaneous veins in the external half of the infra-clavicular and mammary regions, and axillary side of the right arm,—instead of an enlargement of the superficial veins of the neck, right half of the chest and arm forming a continuous mesh of knotty swollen big veins; no change of features—instead of staring, protuberant eyes, with lips, nose, and countenance of a livid hue. Pressure on the œsophagus had, at first, caused no dysphagia,—instead of great and extreme difficulty of swallowing. And pressure on the subclavian artery had made a variation in the two pulses, but it was slight—instead of strongly marked. The moderation of these effects may have been owing to the feebleness of the compression exerted by the aneurism, and this, in turn, may have depended upon the peculiar direction of the latter.

VII. An unusual relation of the pneumogastric nerve to the carotid artery and jugular vein, was observed at the point of deligation. The nerve was on a plane more anterior than that occupied by the vessels, and although, thus, the most superficial of the contents of the sheath, it still preserved its median situation as usual. It is more than probable that instead of being an original conformation, this relation was accidentally produced by the aneurism. As from the protrusion of the tumor forwards, and the position of the nerve on its anterior face, the nerve was drawn away from the direction that it would have otherwise occu-

ped. Hence it appeared, on dissection, to be passing downwards in a diagonal line from behind to the front, and the vessels not undergoing a corresponding displacement, the alteration in relation necessarily occurred. The possibility of an aneurism thus causing an anatomical deviation is an important fact, inasmuch as its knowledge prepares the surgeon for modifications it may necessitate in the usual performance of his operation. In the above case the difficulty was obviated by introducing the needle in a reverse manner to that commonly directed.

VIII. The most unique circumstance, in the above case, was the external opening of the aneurism. As had been predicted, before the lapse of many hours the episternal tumor opened—exactly 43 hours after the operation—but instead of an issue of blood with its fatal consequences, serum alone escaped and safety followed. This event established the utility of the ligature, by indicating the perfect way in which the blood of the sac had coagulated, after the operation; a solid clot remained within and unmixed serum drained away. I can find no record of aneurism terminating similarly, so that the above case may be regarded, as exhibiting a fact in pathological knowledge not previously demonstrated. It has frequently been observed, that after operations for aneurism, the clot was remarkably firm, and it has been received as a necessary belief, that the forcible action causing this result must have induced, as a cotemporaneous result, a thorough separation of serum; but until the above incident, this opinion had probably not been substantiated by any ocular proof, or by an experimentum crucis of a positive kind. Contrary to what might have been expected, the episternal swelling completely disappeared, and left no trace behind, after the evacuation of the serum, neither corrugated sac, nor partially filled tumor. This peculiarity appears to have been dependant upon the muscular covering of the aneurism. Before deligation the sac, being then in fullest size, caused the greatest distention of the surrounding muscles (sterno hyoid and sterno thyroid); as long as its volume remained unreduced, the latter parts were incapable of exerting their tonicity, since this power was overborne by the force of the constantly recurring circulation. When, however, this last was weakened, by coagulation and its attendant serous discharge, then tonicity came into play, the muscles abbreviated themselves, and the sac was by so much diminished. As the amount of drain augmented, the contraction of the sac increased and, *pari passu*, its capacity was unavoidably decreased. It is, therefore, easy to understand that in the closer approximation of sarcous elements, which these changes imply that the peculiarity mentioned was produced, so that there was a complete adaptation preserved between the capacity of the sac and the bulkiness of its contents, for as the latter lessened so

was the former decreased. Had, however, the wall been simply membranous, then the evacuation of the serum must have left the sac partially filled, or, in other words, too large for the contained clot; and its parietes not being resilient must have partially collapsed, and, consequently, there could not have been the complete disappearance which did occur.

IX. At the spot where these muscles first touch each other upon approximation, a small fissure, as has been stated, was found during dissection; it corresponded with an opening, observed during life, in the integument, to which the exterior of the sac was intimately connected by intervening cellular tissue, and it led into a minute canal seated in the interior of the aneurismal clot. This was the course which the probe followed, when first introduced, on the 18th October. The canal only extended through a part of the coagulum, and its floor was formed by very dense resisting fibrin. Its formation may be referred either to force used in the introduction of the probe while the fibrin was not yet thoroughly consolidated; or to the insertion of the instrument between two concentric laminae of fibrin, which were, at the time, somewhat separated by interposed serum. The latter of these reasons is the more likely, from the circumstance of the fibrin, underneath, not having been penetrated so as to draw blood from the artery immediately below, for had the clot been actually pierced, the probability is the same force would have rendered the perforation complete throughout. It is, also, for the above reason, more probable that it was a natural channel accidentally discovered, than one forcibly produced, and it may have so happened that the probe was inserted into the conduit along which the extruded serum separated from the consolidating fibrin. The features, we have been considering, exhibit proof of the perfectness of fibrillation; of course this effect was due to the ligature.—but how far the topical applications resorted to, may have been adjuvant in establishing or strengthening it, is not easy to determine. It does not seem proper to deny them any merit, nor to suppose they were wholly nugatory, for it is well known that under favorable circumstances chemical agents become powerful inspissants. Guerin, in 1779, mentioned cases of encysted or mixed aneurism, which were cured by applying to the tumor compresses soaked in cold lead lotions; by administering to the patient acid drinks of ʒj of the eau du rabel to the pint of diluent; by keeping the patient perfectly quiet; and by favoring the action of the refrigerants, by a suitable regimen; and finally by avoiding all compression.

X. The opinions entertained, at the present day, of the danger to the brain from cutting off its supply of blood through even one carotid, are diametrically opposed to those maintained by distinguished surgeons of a later period, and even by some not many years back, as Sir A. Cooper

Mr. S. Cooper, Mr. Miller and Mr. Wardrop. The first observes, "the carotid may be tied without injuring the functions of the brain," and the latter in Costello's Cyclopaedia of Practical Surgery remarks, "no one now (1841) entertains the slightest fear for the intellect and other functions of the brain," after obliterating the carotid. Of the extreme liability to occur of the result here denied, there can be now no doubt raised; and aware of this fact, the question arises,—how far should the danger it entails, form an objection to the ligature of the carotid artery in innominal aneurism. To this I think these words of Dr. Cheever's designed by him to be of general application, are a complete reply—"That the facts are to be considered as not rendering at all doubtful the propriety of the operation in the majority of the cases in which it is at present had recourse to, but as strongly discountenancing it in nearly all instances where the disease for which it is employed does not positively threaten the patient's existence." (London Med. Gazette.) Statistics prove that cerebral symptoms happen to one of about every eight cases in which carotid deligation is practised, and that they are the most common cause of death in fatal cases, constituting two and one-third of the whole number. Yet, notwithstanding this frequency, as well as the circumstance of their repeated occurrence after the Hunterian operation, the instance above described contains the first record of fatal cerebral symptoms having followed the Brasdorean operation for innominal aneurism.

XI. With a view to determine the character of the cerebral disorder, hitherto witnessed, after ligature of the carotid for the cure of aneurism the various reports as given by Norris (*op. cit.*) have been examined, and I think the following species may be identified; in which the prominent and frequent occurrence of paralysis is remarkable.

1. Symptoms of phrenitis. Happening a few hours after the operation, and disappearing in health.

2. Immediate apoplexy: (within twenty-four hours after deligation) partial recovery, but death before many days.

3. Slight convulsions, ending in recovery.

4. Simple cerebral disorder—variously exemplified; as in loss or perversion of one or more special senses, error of common sensation, dilatation of one pupil, dysphagia, feeling of bewilderment: unaccompanied with general paralysis, and not producing death.

5. Vague symptoms of cerebral disturbance, preceding paralysis, which latter seen on fourth day.

6. Paralysis confined to one extremity. Of temporary duration; occurring on the eighth day, and disappearing four days afterwards.

7. Paralysis more general, and ushered in by drowsiness. Also temporary.

8. Paralysis preceded by convulsions, and by stupor. Convulsion appearing 1½ hours after operation; stupor lasting two days.

9. Immediate hemiplegia, symptoms persistent, death early. (Paralysis first seen an hour after the operation, and fatal on the fifth day.)

10. Temporary hemiplegia—slow in accession, slight in development, short in duration, and ending in recovery.

In addition, twitchings, tremblings, &c., have been noticed with giddiness, &c., but usually they have ushered in paralysis, or, after a momentary duration, passed off without any fulfillment. When paralysis occurred, it was exhibited on the side of the body opposite to that on which the artery had been tied; but when other symptoms, they were displayed irregularly. In the case I have reported, the semeiological features were different to the foregoing both in kind and in arrangement. The first marks of cerebral disturbance were observed on the 6th day after the operation, as pains along the right side of the head; afterwards an uneasy feeling in the right ear; on the 13th day, evidences of pulmonary congestion, or dyspnœa, cough, pituitous sputum, copious expectoration; next day, slowness of the pulse, only counting 60 beats a minute, at a later period, the pulse fell to 46, and during the rest of the time, it fluctuated between this number and 64. On the 17th day, a paroxysm set in, as it were, from encephalic oppression, and signified by adynamic phenomena, as gravescent stupor, difficulty of articulation, involuntary twitches in the fingers, &c.; out of this fit, hemiplegia arose, first visible in the lips; after a few hours the patient gradually regained intelligence, and recovered from all the previous symptoms, except the paralytic, and he endured the latter till 70 days longer, when he expired.

XII. The symptoms that immediately ushered in the hemiplegia were of a comatose nature. The occurrence of lethargy, after closure of the carotid, has been long known. The Arabians called this vessel "the apoplectic vein," thus connecting it directly with this peculiar state of the sensorium. Avicenna remarked that, when these vessels were tied, sense and motion were instantly lost. And nearly every ancient writer, Grecian or Roman, from that time forwards, referred to the same circumstance, either in acquiescence or denial. The history of the above case reminds one of paralysis from extravasated blood, by showing that apoplexy was followed by hemiplegia. Out of 14 published cases I can only find two that bore any resemblance to it. In one, reported by Magendie, on the sixth day the patient was attacked with loss of consciousness; "very slow" pulse; irregular respiration, occasionally, noisy; with every mark of approaching dissolution. Some time after, (when not stated,) hemiplegic symptoms supervened.

The other particulars are entirely dissimilar. The second is by Macaulay and is somewhat analogous to the last. In the remaining 12 cases the clinical histories are so imperfect, that no correct information can be obtained as to the proportionate frequency of the symptoms under consideration. In some it is distinctly stated, that the antecedents of hemiplegia were of a different character to the preceding, and in others no allusion of any kind occurs.

XIII. As the case advanced, there were superadded to the ordinary symptoms of hemiplegia, indications of decay of the mental faculties, of disorder of the assimilative functions, and of impairment of excretion; there was no affection of the special senses and no febrile disturbance: but a more singular event than these, was an intercurrent stupor and vigillium. This remarkable alternation was noticed during the last three weeks of existence. The stupor was associated with signs of weakened volition, sensation, and apparently great exhaustion. It generally lasted for 36 or 48 hours, was always connected with costiveness, and usually passed away after a free evacuation of the intestinal canal. A sort of reaction then occurred, the patient became wakeful, power and feeling returned, this continued so for about 3 days during which the appetite would be good, he would sit up in bed, talk and enter anxiously upon personal matters. It was observed that with each relapse into drowsiness, the symptoms of paraplegia became more marked, as if the drowsiness were attended with periodical exacerbations of the central lesion. And again as the recoveries became repeated, the last, in order, exhibited greater signs of sympathetic disturbance than its predecessor, thirst became more urgent, the desire for food lessened, the pulse lowered in strength, &c.

XIV. The cerebral lesions to be expected after ligation of the carotid are of a two-fold kind, those from 1st. inanition, and 2nd. overstimulation. The hemisphere corresponding to the occluded artery is anæmic, whilst the opposite one is over-vigorous; upon the first there is a deficient, while upon the second there is an increased pressure, from the altered degree of fulness of the blood vessels. The effects proceeding from both these conditions are sometimes only temporary, because they are soon remedied by a new or compensatory arrangement of the circulation. At other times, however, serious changes of structure are gradually established, and a sure foundation is laid for permanent disorder. The morbid states hitherto recorded have been congestion, simple inflammation, atrophy, and softening. The case described stands alone, in presenting a new cerebral lesion—abscesses—after carotid deligation. I am not aware of any reported case in which a similar result is described. Indeed, it is so far different, from what is usual, that some might

believe the abscesses were not consequent upon the ligature, and that their occurrence in the right hemisphere was a mere coincidence. They were not bordered by softening and had all the characters of chronicity. For anything that appeared to the contrary, their origin may have been before the day of the operation. Like many other cases of encephalic suppuration, there was a remarkable immunity from the ordinary symptoms of phrenitis; a truth which is sometimes so forcibly declared, that not a single symptom of head derangement exists although pus in large quantity is present all the while. The alteration in form and size of the thalamus opticus, and corpus striatum are interesting, and a few years ago, when the connexion between these parts and the extremities was more admitted than at present, they would be considered as affording a sufficiently obvious explanation of the occurrence of the hemiplegia.

XV. The peculiarities of the aneurism have already furnished several points for observation. Another, of equal interest, is the lateral disposition the tumor possessed. This circumstance, I think, has a practical bearing on the question of operation, and fitly forms a conclusion to this communication. It would seem that the success of carotid deligation must be influenced by the side or segment of the artery from which the aneurism proceeds. If it be the left, as in the case referred to, there will be every prospect of success from the operation, since the introduction of blood into the sac is derived from the current destined for this vessel; if, however, the aneurism were dexolateral, then the same benefit cannot be afforded, as the supply is furnished by the subclavian. Therefore, under the latter circumstance, ligature of the last named vessel should prove more advantageous than of the carotid. And again, were the aneurism equal on either side of the innominate, or a symmetrical dilatation, then the only hope of a certain and sure stasis of blood would be afforded by tying both branches. And lastly, the bearing may be noted which the case, now reviewed, has upon the question of operation, as that question was left by cases published before its time.

It has, then, borne its testimony to the feasibility of the operation; to the propriety of its performance in suitable cases; to the correctness of the inferences formerly drawn,—and thereby has increased the weight of the arguments upon which they depended: it has shewn that ligature of the carotid artery will cause the solidification and reduction of innominate aneurism; that the operation is not more dangerous than ligature of the same vessel, performed for any other cause; and that by it, life may be prolonged if not saved when there is no other expedient to which recourse can be had. Thus disproving the truth of the allegations, popularly expressed, against the operation, to wit., the charge of Miller, that Brasdor's procedure contains in itself the elements of failure (principles

of Surgery) ; and the conclusion of Erichsen, who says, from the facts no surgeon would be again justified in tying the carotid in innominal aneurism (Art and Science and Surgery). And, finally, by the observations it has originated, this case affords the following propositions, as to the cases requiring or negating carotid deligation :—

1. Cases most suitable :—those of uncomplicated innominal aneurism.
2. Cases imperatively requiring :—innominal aneurism with imminent danger from external rupture of sac, pressure on trachea, &c.
3. Cases most favorable :—when the aneurism proceeds from the left segment or anterior circumference of the artery.
4. Cases less advantageous :—those in which the external tumor is nearest the middle of the clavicle.
5. Cases contra-indicating :—complications with aortic aneurism, aortic disease, unless excepted by extreme urgency.

REVIEWS & BIBLIOGRAPHICAL NOTICES.

XI.V.—*The Organic Diseases and Functional Disorders of the Stomach.*

By GEORGE BUDD, F.R.S., Professor of Medicine in King's College, London ; late Fellow of Gains' College, Cambridge ; author of a Treatise on diseases of the Liver, &c. Philadelphia: Blanchard and Lea. Montreal: B. Dawson. 1846. Pp. 252.

The present volume contains 16 lectures, which, with one exception, were formerly published in the *Medical Gazette* and in the *Medical Times and Gazette*. The organic diseases treated of, are congestion, inflammation, ulceration and cancer. The functional disorders are those of a sympathetic kind arising from irritation elsewhere, from deficient secretion of gastric juice, fermentation of dietetic articles, and from defective action of one of the excreting organs, or from some fault in the nutritive processes in other parts of the body. A lecture is also devoted to the symptoms of stomach disorder, and the last two lectures are upon the remedies for stomach disorder.

There are few more interesting lesions than ulcer of the stomach, and we find its discussion has been fully entered upon by our author. The two lectures with which it is occupied, afford an excellent sample of the matter and style of this able production, which we regard as well calculated to advance Dr. Budd's literary fame. Ulcer of the stomach is remarkable for many peculiarities ; it is generally solitary, situated along the lesser curvature of the stomach, nearer the pyloric orifice than the cardiac, and more often on the posterior than the anterior wall. The true

explanation has not yet been assigned for such remarkable preference of locality. In area it may vary from the size of a shilling to that of a crown piece; but its extension in depth is most remarkable, its tendency being to destroy one by one the coats of the stomach, to cause perforation and thus incite fatal peritonitis. Again it is remarkable for its insidiousness, it not unfrequently originates no symptoms of disease much less of danger, the victim may have no reason for considering himself an invalid—and while, for months, he is the prey of a slow disorganization he knows nothing of his danger, his health may be so good that he is receiving the congratulations of friends when suddenly the last barrier is eroded, the ulcer has become a perforation and then the first symptoms of the disease appear, “he is suddenly seized with agonizing pain at the epigastrium, and with the other symptoms of peritonitis from perforation, falls rapidly into collapse and dies within 24 or 36 hours.” Eight years ago our attention was arrested by this fearful destroyer, and we then made notes of the most interesting case that had been presented to the Pathological Society of Dublin, as they appeared in the new series of the *Dublin Quarterly Journal*. One was by Mr. R. W. Smith; the floor had been formed by the pancreas and peritoneal adhesions between the stomach and this gland prevented the usual fatal catastrophe. Cruveilhier has delineated a similar occurrence, and Dr. Budd, in his account, alludes to the possibility of its happening. Such a termination is to be regarded as a natural cure. Mr. S’s patient died of dysentery unconnected with the gastric affection. The second case shews a still different termination, it was mentioned by Dr. R. Law, and in it death was due to hæmorrhage caused by the splenic artery having been opened by ulceration. Similar hæmorrhage is not however necessarily fatal immediately. Dr. B. who enters fully into this morbid event after describing the symptoms of the hæmorrhage, says “at the end of a day or two the hæmorrhage ceases entirely and the patient is left blanched and weak In the majority of instances, after the lapse of some months, or it may be of two or three years, hæmorrhage comes on again The circumstances of the former attack are repeated,” and he adds “the outpouring of blood may occur four or five times at unequal and it may be long intervals.” When, however, bleedings recur in this way the vessel opened must have been different to that in Dr. L’s case, for we can scarcely understand how recover could follow an ulceration of the splenic artery. The third case was by Mr. Scallan, it was singular from the ulcer being at the cardiac extremity, it had opened by an orifice, a quarter of an inch in diameter, and the peritoneal cavity contained the contents of the stomach mixed with serum, lymph and pus, of the inflamed membrane; the patient, a female of 40, was

seized with the usual signs of perforation soon after breakfast, and it is remarkable that a fortnight previously she had an attack almost in every respect similar, only much less severe, which occurred after dinner, and yielded to a dose of Hoffman's anodyne and tr. opii. The fourth case is interesting from its combinations, the ulcer was here co-existent with malignant deposits (cœphaloma), involving the head of the pancreas, the mesenteric glands and the liver, and slightly the kidneys. Another astonishing concomitant, was the presence of oil in the fœces, the patient had not used oil during life.

The next case was adduced by Dr. Stokes, and contains several exceptional features. The person, for 4 years previously, had been subject to growing pain in the stomach and to pyrosis; a large perforation was seen *post mortem*, but not diagnosed during life, on account of absence of the usual symptoms, some days before death he complained of abdominal uneasiness generally, of no pain in any particular spot, blood abstracted was not buffed nor cupped, had a good appetite for food, and took much nourishment. During the last days of his existence the tongue was dry and brown, and there was a contraction of the abdomen above the pubis. The autopsy revealed the obscurities—it was found on dissection—that the perforation had occurred not into the general peritoneal cavity, but into an abnormal sac of the peritoneum, formed by the ancient adhesions of the omentum, which, as a dissepiment, formed with the diaphragm an enclosure within which was the stomach and the products of inflammation. There is no similar case to this on record. Dr. S. in alluding to the treatment to be adopted in such cases, observed he had seen grs XXIV of opium given without inducing the usual narcotism, indeed, he looks upon tolerance of this remedy as a presumptive sign of perforation. The sixth case we noted, occurred to Dr. Lees. It does not throw any light upon the direct pathology of this lesion, but it is singular from its combinations. The gastric ulceration was conjoined with schirrus of the pancreas, erosion of the mucus lining of the duodenum, enlargement of the liver with schirrus tumor of this viscus, extreme dilatation of the gall bladder so that this reservoir extended into the right lumbar region, in front of the kidney. The seventh fell under the care of the well-known Mr. Hutton, of the Richmond Hospital. Ulcers were present in both the stomach and the duodenum; they were believed to have been formed after a recent scald which the patient, a girl of 4 years, sustained, and only survived the accident two weeks. It is not uncommon as Curling first showed, to meet with ulcers in the duodenum after burns, but we believe it is a great rarity to meet them, likewise, as in the above instance, in the stomach. These seven cases were the only ones presented during a term of three years to the society.

Dr. Budd gives an interesting lecture on the developement of sarcinæ. These living creatures are actually developed in the fluid, which is peculiar to the stomachs of some dyspeptics troubled with fermentation of their ingesta. They seem to play an important part in giving character to the disorder, and require direct removal before the symptoms can be subdued. The sarcinæ, says our author, "are square or slightly oblong plates, the thickness of which is about one-eighth of the length of one of the sides. They are divided into four equal squares by lines which join the middle points of opposite sides, and cross at right angles in the centre of the face so as to resemble a packet, bound with cords, which cross at right angles. Each of the four secondary squares is again divided into four ternary squares, which are similarly arranged, but more faintly marked. Perfect individuals vary from the 800th to the 1000th of an inch in the length of their sides, and, under a high power, appear slightly brown or yellow." These parasites, for such they seem to be, were discovered 14 years ago by Mr. John Goodsir. Some interesting cases, with commentaries, are given in the work before us, and of remedies likely to prove beneficial, the following are particularized:—Carbonate of soda, creasote, common salt, bisulphite of soda. The latter enjoys most credit, and is to be given in doses varying from gr. xv. to ʒj. dissolved in water, two or three times a day.

XLV.—*Dr. Conquest's outlines of Midwifery*; intended as a text-book for Students, and a book of reference for junior practioners. By JAMES M. WINN, M.D., Member of the Royal College of Physicians; Physician to the Metropolitan Dispensary; formerly Physician to the Royal Cornwall Infirmary, and to the Truro Dispensary; Fellow, and one of the Council, of the Medical Society of London; and Member of the Huaterian Society, &c. With numerous illustrations on wood by Bagg. London: Longman, Brown, Green, and Longmans. Montreal: B. Dawson.

Dr. Conquest's text-book on Midwifery is well known, and deservedly appreciated. We learn from the advertisement that it has already passed through six editions, and has been translated into the French, German, and Hindostanee languages. Dr Conquest not willing to undergo the labour which a revision of his work would require, permitted Dr. Winn to bring out a new edition. "Neither time, nor labor, nor bed-side observation, have been spared by the editor in his endeavours to sustain the essentially practical bearing of the original work, and to make it of

value to those who cannot find leisure to consult more elaborate treatises on obstetric science." Dr. Winn has greatly enriched the work by his many excellent scientific and practical additions to the text. We would strongly advise every student to order a copy immediately through Dawson.

In the chapter on the placenta, the editor states that having had the opportunity of dissecting a portion of the uterus and placenta, taken from the body of a woman who died of hemoptysis, at the close of the last month of gestation, he has been able to clear up some points, with respect to the difficult question of the placental circulation. With the aid of Dr. Guli he made a careful microscopic examination of the various tissues, and, under a power magnifying 270 times, the following facts were clearly manifested: "1. That the falciform duplicatures of the uterine veins, commonly called sinuses, contained not only parallel, but *transverse muscular markings*, indicating a high degree of contractile energy. As these valve-like bodies are situated at the openings of the sinuses, they must exert a powerful influence in arresting the flow of blood when the placenta is separated from the uterus. 2. That a large amount of *elastic tissue* was combined with the muscular striæ, which also tend to contract the openings of the sinuses. 3. That the *obliquity* of the sinuses was very striking, and indicated an additional provision for arresting hemorrhage. 4. That many of the delicate filaments which are seen passing, from the placenta to the uterus, when these bodies are separated, were composed of looped capillaries, enclosed in a fine nucleated membrane. This membrane is probably a continuation of the chorion. These loops form as it were, villi and project, but do not open into the sinuses. They correspond exactly with the description given of them by Dr. Goodsir. 5. That the tissue of the placenta contained numerous oil-globules showing that this organ, at the close of gestation, has fulfilled its destiny, that it is effete, and about to be thrown off by a process similar to that which separates a seed-vessel from the parent plant.

By a careful deduction from the above facts, and the observations of Goodsir, Weber, Owen, and others, I think it may safely be inferred that the maternal blood enters the placental cells by the curling arteries of the uterus, and that the placental tufts project into these cells. From these cells the blood is returned by the uterine veins without having left the maternal blood vessels. The fœtal tufts are therefore bathed in the blood of the sinuses, and the blood of the fœtus is purified by a sort of action similar to that which obtains in the radicles or fibrils of the roots of a plant, by which nourishment is extracted from the surrounding medium."

XLVI.—A Manual of the Practice of Medicine. By **GEORGE HILARO BARLOW**, M.A. and M.D.; Cantab. Fellow of the Royal College of Physicians; Physician to Guy's Hospital; to the Magdalen Hospital; and to the Philanthropic Society. With additions by **D. Francis Condie**, M.D., Fellow of the College of Physicians; Author of a Practical Treatise on Diseases of Children, &c. Pp. 607. 1856. Philadelphia: Blanchard & Lea. Montreal: B. Dawson.

The story is told of a celebrated surgeon in the "good old times" of heroic treatment, that he was accustomed to prescribe to his hospital patients *en masse*, by issuing the order one day to "bleed the north ward, and physic the south," varied the next day by "physic the north and bleed the south ward." To the physician of the present age, the extent to which depletory treatment was carried some fifty or a hundred years ago is rather startling. Yet our predecessors were astute men, and careful observers, and not at all likely to pertinaciously persevere in a practice decidedly mischievous. There must have been some difference in the type of disease, some peculiarity in the individual to render him tolerant of such treatment. And, moreover, when we come to examine the matter closely, we find that their success was very fair, and, considering the great light thrown by modern investigation on the nature of many diseases, will compare favorably with that of the modern physician. Be the causes what they may, the fact is almost universally recognized that people now-a-days, as a general rule, will not tolerate powerful antiphlogistic treatment. Of course to this rule there are many exceptions, as, for instance, all cases of acute inflammation occurring in strong robust persons. But even in many of such it cannot be carried to an extreme length. In every new work issued from the press, we find the subject of blood-letting, that most powerful of antiphlogistic remedies, treated in a manner consonant with the prevailing opinion derived from daily experience. Mr. Barlow, whose work is the most recently published on practice of medicine, has some excellent remarks on general and local depletion. There are three effects produced by bleeding:—
 "1. A diminution of the power and frequency of the heart's action; 2. A derivation of the blood from the inflamed part; 3. A modification of the character of the blood itself." The first effect is produced either rapidly or slowly, depending in a great measure upon the position in which the patient is placed. If he be bled in the erect position, syncope quickly supervenes, in consequence of the rapid removal of pressure from the brain and medulla oblongata, and the heart's action becomes much sooner impaired than if the same amount of blood were abstracted

from a patient lying horizontally. "The depressing agency of depletion is two-fold—the one more speedy, and at first more powerful, but, on the other hand, more transient, acting through the brain and *me.ulla oblongata*, and producing an effect like that of sudden concussion or shock;—the other, more gradual, but more persistent, arising from the abstraction of the vital stimulus." Dr. Barlow recommends in those cases where faintness occurs before much blood is lost, to take it slowly from the patient in a recumbent position. In this we disagree with him; for we think it will be found that those who cannot bear a moderate loss of blood in the erect or semi-recumbent position, are precisely those in whom bleeding is contra-indicated, no matter what may be the name given to the disease for which the remedy is employed. It cannot be too prominently kept before the mind of the practitioner that bleeding is as powerful for evil as for good; "that, on the one hand, it is capable of cutting short the inflammation, disposing to a favorable termination, or so modifying the character of the inflammatory effusion as to favor its absorption; on the other, it may dangerously, or even fatally, depress the powers of the patient, or so modify the character of the effusion as to promote its degeneration and decay, and consequently render it incapable of being either organized or absorbed."

In all works on medicine we find it stated, that bleeding is better borne by persons residing in the country than in towns. Some of our country confreres, however, are beginning to find that inflammatory diseases, even of the lungs, do not demand active blood-letting. In this number, Dr. Gilbert draws attention to the "change which has occurred in the character and requisite treatment of inflammatory diseases of the lungs within the last four or five years in the Eastern Townships." From this paper we learn that the rural population do not bear blood-letting any better than the inhabitants of the cities. We are of opinion, moreover, that the change which Dr. G. recognises has existed longer than five years, and that others have seen elsewhere the necessity of extreme caution in the employment of the lancet. In the majority of cases of inflammatory affections; indeed, in every case, excepting two, which has come under our treatment since the commencement of our practice we have never felt warranted in bleeding generally. Local depletion, and that to a limited extent, is what we have practised. We may add, moreover, that we have never yet had cause to regret having adopted this course.

Dr. Barlow's object in this work has been to lay before his professional brethren, more particularly students and younger practitioners, a system of medicine based upon the etiology, or what he would venture to call—the natural history of disease.

We have read many portions of the volume, and consider it a compact and reliable hand book for the student—a work quite up to the present state of medical science, and one which may be profitably consulted by the junior practitioner.

The Medical Chronicle.

LICET OMNIBUS, LICET NOBIS DIGNITATEM ARTIS MEDICÆ TUERI.

Lunatic Asylums.—We learn from the *Kingston Morning Herald*, that the working plans are in preparation for an Asylum at Kingston, which will accommodate nearly 200 patients. "The construction will be pushed on with vigor, and in all probability portions of it will be completed for occupation within the present year." This is the first intimation we have received of the intentions of Government to erect a General Lunatic Asylum. We know that Dr. J. P. Litchfield, has been appointed to superintend the erection of a building for Criminal Lunatics, and we sincerely hope that this one is not to be appropriated merely to this class. If so, it is a piece of wanton and reckless expenditure, for which Government cannot be too strongly condemned. When will Canada have 200 criminal lunatics?—never, it is to be hoped. If, however, it be intended for all classes of insane, then it is a commendable act, and in view of the great and pressing necessities of the case, ought to be pushed forward with great vigor. In Dr. Litchfield Government has a gentleman who understands thoroughly everything relating to the management and treatment of the insane. ~

Useful chart.—We have been furnished with a copy of "a chart of incompatibles and poisons, embracing the chemical theory of the former and antidotes tests, &c., appropriate to the latter. By J. W. Hoyt, M.D." We think highly of it, and would suggest our readers to obtain copies for themselves and get them mounted on rollers and hang them up in their studios.

Communications have been received from Dr S. C. Sewell and Dr. P. Shaver, and will appear in our next.

Annual Report of the Commissioners of Emigration of the State of New York.

During the year ending the 31st December, 1855, there have been treated in the wards of the Emigrant's Hospital, Ward's Island, 11,532 patients. In the refuge department, 10,582 individuals have received professional assistance for diseases not requiring hospital treatment, of these there were discharged 8713; died 1043; remaining 776.

In the Surgical Department of the State Emigrant's Hospital the whole number of cases treated was 3,519, the number of cases cured and discharged 3,120, and the number of deaths 64, a less than 2 per cent. on the number of cases treated. Of this department Dr. Carnochan is Surgeon-in-chief.

TO CORRESPONDENTS.

Dr Guerin—We regret that the errors should have occurred. Through mistake we were deprived of the kind aid of our friend, by whom we had intended the corrections should have been made.

BOOKS RECEIVED FOR REVIEW.

From Messrs. Blanchard & Lea, Philadelphia:—

Neligan's Atlas of Cutaneous Diseases, 1856. *Miller's Principles of Surgery*; fourth American from the third and revised English edition, 1856. *Lehmann's Manual of Chemical Physiology*; translated, with notes and additions, by J. Chester Morris, 1856. *Flint on the Respiratory Organs, 1856.* *Wharton Jones' Principles and Practice of Ophthalmic Medicine and Surgery*; second American edition, with additions, from the second and revised London edition, 1856. *Neill & Smith's Compend of Medicine*; a new edition, revised and improved, 1856. *Brown on Surgical Diseases of Women, 1856.* *Bowman's Medical Chemistry*; second American from the third and revised London edition, 1856.

Report, and Appendix to the Report, of the Committee for Scientific Inquiries in relation to the Cholera Epidemic of 1854. From the General Board of Health, London. Through Dr. Gibb.

Report on the Cholera Outbreak in the Parish of St. James, Westminster, during the Autumn of 1854. From Mr. York, Secretary to the Cholera Inquiry Committee. Through Dr. Gibb, London.

Milton's Practical Remarks on the Treatment of Spermatorrhœa and

some forms of Impotence. London: Samuel Highley. From the Author.

Wright on Headaches. London: Samuel Highley. From the Author.

Annual Report, including the Medical Report, of the Commissioners of Emigration of the State of New York, for the year ending December 31, 1855. From Dr. Carnochan, New York.

The Pathology and treatment of stricture of the urethra, both in male and female, being the treatise for which the Jacksonian prize for 1852 was awarded by the College of Surgeons of England. By Henry Thompson, F. R. C. S., M.B. London, John Churchill. From the author.

CORRESPONDENCE.

To the Editors of the MEDICAL CHRONICLE.

GENTLEMEN,—A question of deep interest to many of our confrères, and one I should like satisfactorily answered, is: Why does not the Government settle the Coroners' accounts? My reason for propounding the above query is that, to my knowledge, there are medical men in this city, and others I have heard of in the country parts within the district of Montreal, to whom the Crown is in honor indebted in certain amounts for professional services rendered at Inquests.

As the Government are so tardy it would be well to memorialise them, as there must be some hundreds of pounds due for Inquests to the medical men of this district; whether other districts are in a similarly languid condition is to us unknown. The affair is beginning to assume a grave aspect, and it remains to be seen whether the medical men intend working for nothing.

For myself I have performed no small amount of service and there is between £15 and £20 due me for inquests as far back as the year 1853. Really, the affair should be looked into, unless, as I before said, we consent to examine into the cause of death of individuals to the great sacrifice of time and personal comfort, laying aside the chance of being bullied afterwards by some wordy gentlemen of the long robe, and all this without even an acknowledgment on the part of the Crown, but merely "Oh Dr. so and so you may rely on receiving your fee as soon as the Government allow the accounts."

I remain, Gentlemen,
Yours faithfully,

M. D.