

## Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured covers /  
Couverture de couleur
- Covers damaged /  
Couverture endommagée
- Covers restored and/or laminated /  
Couverture restaurée et/ou pelliculée
- Cover title missing /  
Le titre de couverture manque
- Coloured maps /  
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /  
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /  
Planches et/ou illustrations en couleur
- Bound with other material /  
Relié avec d'autres documents
- Only edition available /  
Seule édition disponible
- Tight binding may cause shadows or distortion  
along interior margin / La reliure serrée peut  
causer de l'ombre ou de la distorsion le long de la  
marge intérieure.
- Additional comments /  
Commentaires supplémentaires:

Continuous pagination.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /  
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /  
Qualité inégale de l'impression
- Includes supplementary materials /  
Comprend du matériel supplémentaire
- Blank leaves added during restorations may  
appear within the text. Whenever possible, these  
have been omitted from scanning / Il se peut que  
certaines pages blanches ajoutées lors d'une  
restauration apparaissent dans le texte, mais,  
lorsque cela était possible, ces pages n'ont pas  
été numérisées.

THE  
CANADIAN PRACTITIONER

---

---

EDITORS :

ADAM H. WRIGHT, B.A., M.D. Tor.  
EDMUND E. KING, M.D. Tor.

ASSOCIATE EDITORS :

JAMES F. W. ROSS, M.D. Tor.                      JOHN CAVEN, B.A., M.D. Tor.

MANAGER ADVERTISING DEPARTMENT :

MR. W. LLOYD WOOD.

PUBLISHERS :

THE PRACTITIONER PUBLISHING COMPANY,  
TORONTO.

---

---

VOL. XXIII.]

MARCH, 1898.

[No. 3

---

---

## Original Communications.

### THE GREAT OMENTUM.

WITH MORE ESPECIAL REFERENCE TO THE PART PLAYED BY IT  
IN INFLAMMATIONS OF THE ABDOMINAL VISCERA.<sup>1</sup>

BY J. G. ADAMI, M.A., M.D.

Professor of Pathology McGill University, and Pathologist to the Royal Victoria Hospital,  
Montreal.

WHEN so much has been written upon other organs, it is remarkable how little attention has been paid to the great omentum. There is a scanty literature upon pathological conditions of the organ—if organ it may be termed—mainly upon cysts and tumors of the same. This, with a few papers upon its development, and still fewer upon sundry points in its histology and upon

<sup>1</sup> Being the main body of a paper read before the Toronto Pathological Society, December 29, 1897.

surgery, and until the last few months practically none upon its physiology, represents all that has been written during the century. Evidently, according to the *Index Medicus*, during the last ten years, when medical scribbling has been at its height, not two papers per annum have been published of which the main subject has been some one or other condition of this viscus. And yet this is the ominous organ of the augurs, every aspect of which, studied by them, was found full of fate. The older priestly comparative anatomist is long past and gone, and now no modern comparative anatomist so poor as to do the omentum reverence.

Thus, if following the time-honored custom one wishes to lead gently up to his subject—to introduce it in a respectful manner—by referring to the observations and conclusions of those who have gone before, he finds himself confronted by the fact that here, in connection with the great omentum, there is little to be said unless he travels back through the centuries. There is no voluminous literature, no array of modern continental authorities, whose names, in length and difficulty of pronunciation, are in inverse proportion to the facts and theories they bring forward. There are, it is true, isolated observations upon the omentum, of recent date—observations of great value by Ranvier, Durham, and others; but for any attempt at broad generalization upon the functions of the same we have to wander back to the seventeenth century, and beyond that to the fathers of medicine. And strangely enough, passing back to the limits of medical history, we find that old Hippocrates noted that which, as I shall have later occasion to point out, was perhaps more nearly correct than any of the observations for long centuries following. In addition to his aphorism that if the omentum protrude it necessarily mortifies and drops off, he makes a longer reference in his book "*pezi topon.*" Writing concerning exudations, he turns to one side to refer to the spleen. "In fever," says he, "the spleen becomes enlarged, increasing in size as the body becomes emaciated. Indeed, everything which causes the spleen to become enlarged consumes the body. When the body becomes emaciated, if the spleen be swollen and the great omentum attenuated at the same time as the body, then the fat which was in the omentum is dissolved, and when the organ is free from fat, the growing spleen furnishes a flux, and the omentum, which is close by, which has vessels, and those vessels empty, receives that flux."<sup>2</sup>

It is true that Littré and Adams and the modern commentators regard the work in which this passage occurs as almost certainly not

<sup>2</sup> Œuvres complètes d'Hippocrate, Littré's edition, Paris, 1819, p. 314.

by Hippocrates. But within the last few weeks, Spaet, in his study of a remarkable manuscript (*Anonymus Londinensis*, one of the rich horde recently unearthed in Egypt by the British Museum authorities), points out that Hippocrates clearly indulged in theoretical speculation, and that the commentators have been wrong in taking from him all the so-called philosophical writings. Hence it is not impossible that the treatise is by the physician of Cos. Whoever be the author, it is curious that he should have spoken of this flux into the omentum almost with the same breath with his discussion upon dropsy. Indeed, he appears to imply that this flux is dropsical. The wise old Malpighi, commenting upon this passage, carries the connection to its natural conclusion and makes the definite suggestion that from the omentum the flux may pass into the abdominal cavity and be a cause of dropsy. It is remarkable that, so far as I can read, no authority since has taken up the relationship between this vascularity (and delicacy) of the great omentum and the development of ascites. There is only the suggestion of a German country practitioner, one Landgraf,<sup>3</sup> who in 1870 called attention to this possible function. He gave the notes of a case of ascites associated with cardiac disease and of many months' duration, which had proved absolutely intractable to fourteen tapplings. Being called one day to the case, he found the abdominal distension so great and the respiratory difficulty so alarming that death appeared imminent unless the fluid were removed. He had no trochar with him and was compelled to perform paracentesis by means of a lancet and a piece of tubing. As a result there developed at the incision a hernia of the great omentum of the size of a walnut. The protruding tissue true to Hippocrates' aphorism, sloughed off, and there was no further untoward result; but within a few days the ascites came to an end, and, after one further tapping, never recurred. Landgraf makes the obvious, though it may not be absolutely logical, suggestion that the great omentum is largely responsible for the exudation of ascitic fluid. At the last moment I find that a *confrère* here in Toronto, Dr. J. F. W. Ross, has arrived at a similar conclusion, and that in his very full article upon the omentum<sup>4</sup> he quotes Lawson Tait as holding like opinions.

But if Hippocrates may have come near to indicating one important function of the viscus, that, namely, of regulating to a greater or less extent the amount of fluid passing into (and out of) the peritoneal cavity, those who followed him held other views. We owe to

<sup>3</sup> *Deutsches Archiv für Klinisches Medicin.*

<sup>4</sup> *American Journal of Obstetrics*, xxviii., 1903, No. 6.

Aristotle the commonly accepted opinion that it is formed of light membranes, and so placed, covering the intestines, as "to preserve the innate heat of the body." Galen accepted and expanded this view. He gives the case of a gladiator who, having lost his omentum through an abdominal wound, recovered from the injury, but thereafter felt cold in his abdomen.<sup>5</sup> So far as I can find from inquiry, this Aristotelean view remains the most commonly accepted at the present day.

With the renascence of medicine the obscurity of the omentum made it the text for numerous most wild discussions. In his "Exercitatio de Omento," Malpighi collects some of the leading theories. Thus, for example, Fabricius ab Aquapendente (well known in connection with the discovery of the circulation) held that it was the seat of those winds which so torture hypochondriacs. Laurentius, Bauhinus, and others considered that it collected the humors going to the intestine or the excrementitious matters from the spleen, while Cordæus taught that it was a second stomach or food-store from which the stomach received again the food; whence, by him, man was declared to ruminate like unto brute beasts.

Malpighi himself was cautious of attaching any function to the viscus. He was even doubtful whether to accept the vulgar opinion as to its heat-preserving properties. He was especially interested in its relationship to the storage of fat, and has not a little to say concerning the use of fat and its nature as a food. Thus he concludes that fat is important to the economy, is taken up from the intestines and stored in the great omentum and other regions for further use. In short, Malpighi represented the reaction to the wild theorising of his immediate predecessors, and from his time onward it may be said that the theorizing has given place to agnosticism, or, rather, to indifferentism. With rare exception, no one nowadays troubles to think of the viscus.

Possibly this indifferentism is a right attitude. The great omentum varies much in size; and when an organ is very variable and at times almost absent, we are, in general, correct in regarding it as of relatively little use—as a disappearing and *therefore* useless structure. I think, however, that it is not quite so variable as one is apt to regard it; very often, it is true, the coils of the small intestine are wholly exposed, and the first impression is that the omentum is inconsiderable. But it is there, and if the mass of delicate membrane be unravelled it is most often found to be quite extensive.

<sup>5</sup> Galen: De usu partium. Frobenius' edition. T. i, lib. 4, 1567, p. 1244.

In 150 consecutive autopsies I found it—

Coiled under the transverse colon,	10 cases.
Coiled under the stomach,	1 case.
Coiled in front of and above the transverse colon,	5 cases.
Coiled and lying over the transverse colon to the left,	2 “
Passing up over the liver, without adhesions,	2 “
Passing up under the liver,	1 case.

Studying the organ in man, we are at a disadvantage, for most of the human subjects of the pathologist and anatomist have been bed-ridden for some little time, or may have suffered from disease of the abdominal cavity. With long continuance in the supine position, it is more than probable that this floating membrane becomes liable to assume relationships which would rarely be found in those suddenly killed. My observations tally with McLeod's suggestion that when the omentum is coiled up, the subject, in most cases, has been upon his back for some little time.<sup>6</sup>

On the other hand, where the omentum seems particularly voluminous, completely covering over the whole anterior aspect of the lower abdomen, I have found that there may again be deception. Thus, only on Sunday last, at an autopsy upon an individual presenting cerebral disturbance with no abdominal lesion, the edge of the membrane passed well beyond the pelvic brim into the pelvis; but here the stomach was large and full, the transverse colon crossed a good inch below the umbilicus, and as a consequence the increased size of the omentum was only apparent.

Granting all this, we must, however, grant also that there are variations—great variations. It can be most voluminous; it is also stated to have been found completely absent. Personally I have not come across this last condition. In the above-mentioned 150 autopsies, there were two subjects, both old men, in which the omentum had a shrunken appearance and was only an inch and a half across, while in a third case, a phthisical patient of twenty-six years, it was represented by three tags of delicate reticulated membrane, one 6 x 6 cm. (2.25 x 2.25 inches), arising from the postero-inferior aspect of the middle region of the transverse colon, one 7 x 6 cm., from the antero-inferior aspect of the same region, while a third, 6 x 14 cm., passed up from the left extremity of the transverse colon to beneath the left lobe of the liver.

<sup>6</sup> Durham points out that in rabbits and guinea pigs in which peritonitis has been induced, the omentum becomes rolled and folded up, and notes that he observed a similar condition in a young child. While such rolling up does occur in association with acute peritonitis, my notes show that it is far from being a form of constant condition. (Durham, p. 9, "Pathology," IV 1897, p. 355.)

In the lower animals it is much more regular in size and position, and there can be no question of its being a disappearing organ. Indeed, the contrast between the condition in man and brute might also seem to give support to the protective apron theory and to the further theory that the assumption of clothes by man is at last beginning to tell upon the internal organs—to lead to the transmission of atrophy of the internal apron in consequence of disuse!

But were the "apron" theory valid, we should expect to find an inverse relationship between the development of the heat-retaining panniculus adiposus and the development of the omentum. This we fail to find. When there is a thin abdominal wall, there, as a rule, the omentum is thin and with little fat. The apron theory must be put aside.<sup>7</sup>

What, then, can we say concerning it and its function or functions? It seems to me that there is one feature about the great omentum which is the all-important feature histologically and phy-

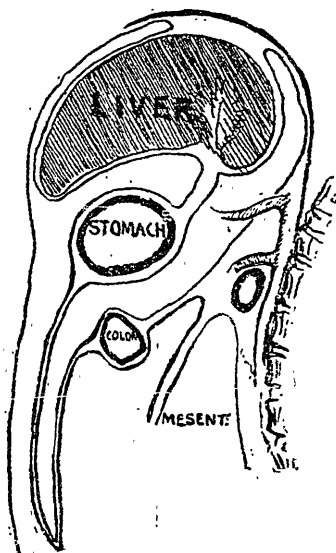


Fig. 1.—Diagrammatic representation of the relationships of the Great Omentum. (Modified from Lockwood.)

siologically, and that is the main characteristic of its structure. It is true that it is a membrane, or, more correctly, a double membrane folded upon itself, the two layers forming the anterior and posterior

<sup>7</sup> That is, in its usual presentation. But it is possible that when, through cold, the vessels of the abdominal parietes become contracted, and the splanchnic vessels distended and congested, the great omental vessels share in this congestion, and that thus a warmed and congested membrane is interposed between the cooled parietes and the intestines.

serous investments of the stomach, passing downwards to form the anterior portion of the omentum, and then doubling upon themselves to form the posterior aspect and travel upward to enclose the transverse colon. But these membranes fused together are nothing but endothelial and connective tissue-elements. What is characteristic of all great omenta, however delicate, or however loaded with fat, is their remarkable vascularity. The vascular supply is altogether in excess of the needs of the membrane itself; and if the great omentum has any function, that function must be sought for through the vascular system. Without exaggeration, the great omentum may be regarded as a mechanism for supporting and keeping in position a rich arborization of delicate vessels separated by as slight a cell-layer as possible from the peritoneal cavity. As might be expected, with the branching of the main vessels, the finest and most delicate vessels are largely collected toward the periphery and along the free border of the omentum.\* Here it is, therefore, that the most prompt reaction is liable to occur.

It is from this point, then, that we must start if we are to appreciate the part played by the omentum in the economy. I have already hinted that it is from the abundant network of delicate vessels that there may be abundant flow of fluid into the abdominal cavity. Similarly the rich system of contained lymph-spaces and lymphatic vessels, and, indeed, of blood capillaries, may be the means of rapid absorption of fluid from the same cavity.

Much as I should like this evening to enter into the more physiological aspects of the omental functions, I must desist; for my personal observations along the lines just indicated are not as yet complete or in a proper state for bringing before you.<sup>8</sup> What I wish to bring before you to-night is the evidence we possess concerning the activity of these omental vessels in conditions which are constantly being brought before our eyes, but which, it is worth noting, would appear not have been thought worth noting. I refer to their reaction in the localized inflammations of the abdominal cavity, and the results of that reaction in the shape of omental adhesions. I have hunted up all the literature at my disposal. Every one refers to these adhesions, but no one would seem to have thought it worth while to tabulate them or to record their frequency. I cannot pre-

8 Durham (*loc. cit.*) records some most interesting observations upon the part played by the leucocytes in relation to the surface of the great omentum, but does not indicate with full satisfaction the extent of passage of fluid, leucocytes, or foreign particles into or out of the viscus. Similarly, Adler and Meltzür (*Journ. of Exptl. Medicine*, i., 1896, page 482) discuss very fully many important points in connection with the absorption of fluid from the peritoneal cavity, but their observations stop short of determining the exact regions of passage of fluid into the lymph-spaces of the peritoneal wall.



tend that my own observations are as full as I should like. Nevertheless, in 150 consecutive autopsies, in which the abdomen was examined, I possess brief notes upon the more obvious conditions observed, and now, reviewing my notes, I am surprised to find how very common are these attachments, and am impressed at the evidence afforded of the rapidity with which the omentum appears to apply itself to an inflamed area, becoming sympathetically the seat of inflammation, becoming adherent by plastic, and later by fibroid adhesions. Few, I fancy, realize the rapidity of the process. So delicate are the fine vessels, so small is the layer separating them from the peritoneal cavity, that they readily respond to any irritant. Probably, as Durham's observations would seem to show, the rapidity of the adhesive process is further and largely associated with the remarkable adhesiveness of leucocytes to the omentum in cases

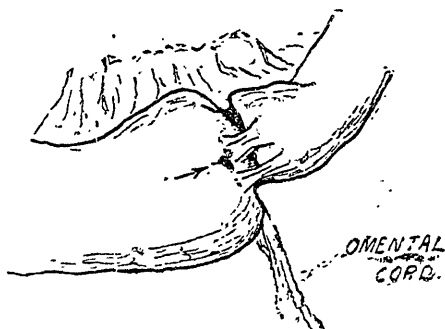


Fig. 2.

of inflammation, and the local accumulation of leucocytes upon the omental surface is the immediate precursor of the fibrinous cementing together of inflamed organ and overlying membrane.

The autopsies referred to were upon the subjects in the post-mortem theatre at the Royal Victoria Hospital—a general hospital, open to all cases of disease save the acute exanthemata, at all ages.<sup>9</sup>

*Adhesions to the Abdominal Walls.*—As might be expected, there were several (8) instances of generalized adhesions, either plastic and acute, or fibroid and chronic, in cases of recent or old generalized peritonitis, and several of localized adhesions along the sites of operation-wounds. Many of these will be referred to later; six were either in the middle line below the umbilicus or in the right inguinal region (for appendicitis), where the adhesion was in the right flank

<sup>9</sup> The pathological diagnoses of these cases are to be found in detail in the annual reports of the Hospital for the years 1894 and 1895.

following incision into a pericecal abscess. In the two cases there were old adhesions of the edge of the viscus along the pubic crest anteriorly. Both of these were cases of generalized tuberculosis, and in both, although there were subserous tubercles of the ileum in the pubic (or suprapubic) region, there were no adhesions of the under aspect to the intestines. There were four instances of old adhesions in the left flank, two in the right flank over the ascending colon, and two to the parietal peritoneum, covering the under surface of the ribs on the right side. All these, in the absence of operation-wounds or definite local disturbance, may have been indications of a previous general peritonitis. There were three examples of incarceration in an umbilical hernia, in one of which there had been "reduction en bloc," and in one case there was attachment to a secondary cancerous nodule at the navel. In one case, also, a large portion of the right border passed into the right inguinal canal, and was adherent over the testis. In a remarkable case of neglected gangrenous appendicitis, with suppurative thrombosis of the mesenteric vessels and retroperitoneal abscess, a large tag of the right border passed down between the intestinal coils to the hind wall of the abdomen, where it was adherent to the right of the root of the mesentery, near the duodenum. Upon separating the recent adhesions, abundant pus welled out from a retroperitoneal abscess. Evidently this tag had prevented general peritonitis. In another case the right border passed down into the pelvis and was adherent to the pelvic wall, forming the roof of a localized pelvic abscess. Here, again, the generalization of a suppurative process was arrested by this means. I shall speak of the walling in of perityphlitic abscesses in connection with the appendix.

Of equal interest are the localized adhesions discovered in connection with the different abdominal viscera. There were, as might be expected, numerous examples of attachment to the intestines.

*Stomach.*—In a case of gastric ulcer, with perforation, plastic adhesions of the omentum doubled upwards upon itself occurred over the area where the large ulcer (upon the anterior aspect of the organ) had been brought together by a Lembert's suture. The operation had taken place nine hours and a half before death.

*Small Intestines.*—In two cases of general peritonitis, one acute, one chronic, there were numerous adhesions. A case of traumatic rupture of the jejunum near the duodenum, in which Murphy's button was applied without success, showed the right border of the omentum adherent by plastic exudations over the seat of junction ;

and in another unsuccessful Murphy button case, where some four inches of the ileum close to the valve had been removed by Dr. James Bell for sub-mucous sarcoma, there were similar adhesions. (In both these cases the intestines had become necrosed and perforated at the mesenteric attachment.) Another case, from a man aged 24, presented a condition which I can only regard as an old healed intussusception. The upper half of the ileum was somewhat distended (11.5 cm. in diameter as compared with 8 cm. below), the obstruction being due to the presence of an annular constriction admitting a cone 6.3 cm. in circumference. The mucosa over this ring showed no cicatrix, but externally there were evidences of old inflammation in the shape of small longitudinal bands running from above the constriction to below it, while a delicate band of the right border of the omentum was adherent to the intestinal wall in the immediate neighborhood.

*Appendix.*—In four cases, all acute, plastic adhesions were found forming portions of the retaining walls around the abscess in perforative appendicitis. In one case already recorded by Dr. C. F. Martin, there was old perityphlitis without marked disturbance of the appendix, and here again the right border of the omentum was adherent and had helped to cause the cicatricial and banded obstruction of the ileum, which eventually led to peritonitis and death.

*Colon.*—I find two examples of adhesion to the sigmoid flexure—one a very interesting case of huge idiopathic or congenital dilatation, the adhesion being to the lower end of the flexure, where the dilatation gave place to constriction, but apparently was not the primary cause of the same.<sup>10</sup>

*Rectum.*—Two examples are recorded of adhesions to the rectum. Case 1. Plastic, to the first part anteriorly, after removal by Dr. W. Gardner of a parovarian cyst and encysted pelvic abscess. 2. Chronic, in a case of pernicious anæmia with arrested tuberculous complications, old apical tuberculosis, perihepatitis, and other evidences of generalized peritonitis, possibly tubercular.

It is, however, when we come to the other abdominal viscera that we meet with some of the most remarkable instances of this liability of the omentum to form local attachments over inflamed areas.

*Liver.*—Four cases. (1.) One was a case of atrophic cirrhosis, with ascites and sero-fibrinous peritonitis after repeated<sup>3</sup> tappings, in which, it may be, that the accumulation of serum in the abdominal

cavity had floated the omentum upward. (2.) A case of calcified old (?) hydatid cyst of the right lobe communicating with the adherent hepatic flexure of the colon. In this region the omentum was also adherent. (3.) Multiple pyemic abscesses of the liver. On the under surface of the right lobe, where the process was most extensive, bulging and almost bursting through Glisson's capsule, the omentum formed, as it were, a plaster over the region. (4.) In the fourth case there were similarly pyemic abscesses of the liver secondary to pericæcal abscess, with suppurative thrombosis of the mesenteric vessels. A case of subacute ulcerative cholecystitis, with eventual perforation, showed also chronic omental adhesions.

*Ovary.*—In one case I have recorded adhesions to the chronically inflamed left ovary.

*Uterus.*—In one case there were several adhesions to the fundus (a case of retained placenta, puerperal metritis, and septicæmia), while in two not a little remarkable instances of hysterectomy, with death some few days later, the omentum passed downwards in between the coils of the small intestine to the bottom of the pelvis, and formed adhesions over the stump of the uterus. In one of these it was the right border, in the other the central portion of the omentum that formed a broad, taut band, running downward to be attached. The resulting disturbances of the bowels, had these patients survived, can only be imagined.

I trust that I have not tired you with this detailed account of omental adhesions. As already stated, I have entered thus fully into the subject because I know of no similar record; 150 autopsies are not a great number from which to glean information, but the reverse. My set of cases is devoid of examples of most of the conditions of omental disease to which attention has been called by previous writers. There were no examples of penetrating wounds of the abdomen plugged by the membrane to which McLeod has more especially drawn attention<sup>11</sup>, or of intestinal rents or perforations obtaining primary closure by similar means, which Gross was one of the first authorities to especially note.<sup>12</sup> Mine are ordinary consecutive and unselected cases; but as such, the fact that the omentum may gain attachment to every viscus lying in the abdominal cavity, and does this very frequently, is brought into strong

<sup>11</sup> Kenneth McLeod. *Edinburg Med. Jour.*, xxiii., 1877 p. 1.

<sup>12</sup> Gross: "System of Surgery," 5th edition, p. 664.

relief.<sup>13</sup> It may pass upward and become attached to the stomach or liver, may journey to the right and form adhesions over the cæcum and ascending colon in the neighborhood of the appendix, or backward to act as a plaster over a retroperitoneal abscess, and, what is still more remarkable, its edge may wander down into the pelvis and become fastened to the rectum, the ovary, or even to the stump of the uterus after hysterectomy. The number of autopsies is not great; but notwithstanding, we find this very large proportion of examples of old and recent abdominal inflammation with the omentum forming adhesions in consequence.

At first sight it looks almost as though the viscus were endowed with powers of active locomotion, and so soon as any localized injury and inflammation manifested itself, forthwith some portion of its border, more especially of its right border, formed a feeler, made its way to the affected area, and within a little time became adherent over it, thus helping to prevent the spread of the inflammation. It almost looks, I say, judging from the facts here thus far recorded, as though this were the case.

But there are other considerations to be brought forward before passing judgment. Although I have been able to adduce so many cases of localized abdominal inflammation, followed by omental adhesions, there were numerous examples in our 150 cases in which no such adhesions had been found, although similar lesions of various organs had been present. Naturally a table of these conditions would be much shorter, for it could include only acute and recent cases of local inflammation, in which the local lesion was progressing. Previous local disease without adhesions, followed by recovery, leaves little or no record. Add to this that it is much more difficult to wade through our somewhat voluminous post-mortem records and note every case in which there has been superficial inflammation of abdominal organs. I have, however, noted in them two cases of cancer of the stomach with perforation and perforative peritonitis; two cases of extensive cancer of the stomach and cancerous peritonitis (without perforation); two cases of very extensive tuberculous peritonitis, all without signs of adhesion anywhere; a similar case of perforated tubercular ulceration of the small intestine and perforative peritonitis, and at least two cases of well-marked subserous intestinal tuberculosis, without noticeable reactions of any

<sup>13</sup> I have left the spleen out of this enumeration, because, while I have an occasional note relative to omental adhesions of this organ, I recognize that our observations are far from complete, in consequence of the organ being pulled forward for bacteriological purposes before its relationship *in situ* could be properly examined. Strictly speaking, every splenic adhesion is an omental adhesion, because the organ is developed within the omentum.

kind in the omentum and neighboring parts. In a case of enteric fever with perforative peritonitis, as is the general rule, there was not a sign of plastic exudation or adhesion anywhere. In two cases of inguinal hernia the omentum appeared indifferent and unaffected; in one there was well-marked localized subacute peritonitis after incomplete reduction of the hernia; in the others the great omentum did not extend below the umbilicus, although there was plastic exudation around the operation-wound. A case of chronic cholecystitis, leading to empyema of the gall-bladder and perforative peritonitis (again a Murphy button case), showed neither old nor recent adhesions of the omentum. Doubtless I might multiply examples. I have, however, given you enough to show that the omentum does not by any means necessarily send out processes to cover over and adhere to inflamed abdominal areas. It is not merely a question of the quality of the inflammation that determines the adhesions. Here are at least a few examples in which plastic and adhesive exudation might easily have been set up—only the omentum did not manage to find its way to the injured area, and as a consequence no adhesions developed. There is no such protective sending out or wandering or chemiotaxis of portions of the omentum to cover over and guard areas of injury and inflammation.

It cannot be urged that the omentum broods like a beneficent Providence over the abdominal contents, descending to minister help where it is needed and to arrest the spread of harmful inflammation. For in the first place, as I have just remarked, there are inflammations and inflammations—where there is very acute disturbance, or where, again, as in typhoid and the later stages of exhausting illness, the reactive power of the organism has sunk to a very low ebb, a serous rather than a leucocytic and fibrinous exudation obtains; and where this is the case there can be no adhesions even though the omentum be lying over the area of injury. And in the second place, while in many cases it appears as though the apposition and adhesion of the omentum had been of the greatest benefit in walling in and localizing an acute inflammatory process, in others, the intervention of the membrane, however great its temporary value, results in serious inconvenience, not to say profound injury. When (to quote one of the examples already given) the omentum passes as a broad band deeply between the coils of the small intestines, to gain an attachment to the stump of the removed uterus or other pelvic organ, it must be admitted that there is serious traction upon and disturbance of the movement of the transverse colon, with grave danger of

obstruction to the small intestines. Indeed, Leichtenstern had collected in the seventies no less than twenty-nine cases of internal hernia of the intestines due to omental bands. To quote from Professor Welch's admirable address upon "Adaptation in Pathological Processes," delivered this year at Washington: "We see here, as everywhere, that nature is neither kind nor cruel, but simply obedient to law, and therefore consistent."<sup>14</sup> In the great omentum we have a singularly delicate vascular organ capable of reacting very rapidly to irritation. That is all that it is safe to say. How rapidly it can react is shown by the case already mentioned, in which, in a moribund girl, dying in nine and a half hours after suture of the perforated stomach-wall, there was already plastic adhesion of the organ over the sutured area. That it becomes adherent to organs so distant from the position in which it is usually found, as are, for example, the anterior aspect of the stomach, the right lobe of the liver, and the cervical portion of the uterus, is an indication of what is scarcely sufficiently realized, namely, that this delicate membrane must constantly be shifting its position, or, at the least, must, in cases of abdominal disturbance, be peculiarly liable to roll about. We think of it as normally covering over the coils of the small intestine, more especially above and to the left, and as very rarely passing lower than the pubic crest. Yet it must roll upward and descend downward, and in these gyrations it is that, being applied to an inflamed area its vessels become rapidly congested, serum and leucocytes exude, and the first stage of adhesion is set up.

<sup>14</sup> Trans. Congress Am. Physicians and Surgeons, iv., 1897, p. 291.

## SUPPURATIVE CHOLANGITIS.\*

---

BY HAROLD PARSONS, B.A., M.D., M.R.C.S Eng., L.R.C.P. Lo d.  
TORONTO.

---

THE specimen† I present is one of suppuration in the upper bile passages, and extension of the process into the surrounding tissues, with abscess formation, and general peritonitis. The patient was a woman of about 45 years of age, admitted to the Toronto General Hospital June 1, 1897, complaining of severe abdominal pain. Of the early history of the case nothing is known, and that of the present illness is very imperfect. I have, however, obtained the following points.

For some months past (the exact time not known) there have been repeated attacks of abdominal pain, said to be sudden in onset and very severe. They passed off rapidly. The pain was general, not localized. No jaundice was noticed, but her physician tells me that there was slight tinting of the conjunctivæ while under observation. With the pain there were chills and vomiting, and this symptom group recurred every four or five days, at times more often, at others less so, say once a week. They were said to last a short time, but one continued for about eight hours, as nearly as we can judge. The temperature rose with each attack. The final peritonitis appears to have come on about two and a half days prior to her admission to the hospital, and at that time the temperature was regularly intermittent, 103° or thereabouts each evening, and normal in the morning.

I saw the patient a day or so previous to her death. She was a large, stout woman, lying on her back in bed with thighs extended, vomiting frequently, face ashy pale and drawn, pulse rapid and wiry. Tongue furred and very foul. Respiration rapid and shallow. The abdomen was full and tympanitic, but palpitation was impossible by reason of the great abdominal pain. There was no jaundice. Autopsy June 4th, 1897, a few hours after death. Rigor mortis and

\*Read before the Toronto Pathological Society.

†From the Pathological Laboratory of Trinity University.



post-mortem staining present. There was a general peritonitis, the intestines being matted together by a layer of grayish fibrin, easily broken down. The subperitoneal tissues were infiltrated and oedematous. The peritoneal fluid was increased and of a grayish, purulent appearance.

*Heart.*—Muscle was pale. No recent changes in the valves. Pericardial fluid not increased.

*Lungs.*—Showed congestion in the dependent parts—no excess of fluid in pleural cavities.

There was an acute spleen tumour.

*Kidneys.*—Negative.

*Stomach.*—Negative.

*Intestines.*—As above were matted together.

*Liver.*—About normal in size—free margin rounded. The surface was smooth, and in general of a dark brown color, but presented numerous areas of a pale yellow color, varying in size, the largest measuring 5x5 cm. These were soft in comparison with the rest of the organ and the larger were distinctly fluctuating.

On section they exuded a curdy yellowish green pus, containing yellow masses appearing caseous. There was no odour. The walls were ragged and caseous in appearance, and the cavities opened directly into the bile ducts, and a connection between different cavities could be found by way of the bile passages. On section apart from the cavities, the ducts were found more or less dilated and to contain pus, the degree of dilatation varying in different parts. The walls were less ragged than those of the cavities, and about some of them there was a zone of pale, yellowish necrotic tissue immediately adjacent to the duct wall. The gall bladder was small and contracted, contained about half a drachm of brownish bile, no calculi, but a few grains of brown sand-like material.

The hepatic, cystic and common ducts were free—not dilated. The portal vein and its branches appeared normal.

No calculi were found in any of the upper bile passages, nor abscess cavities. The pus everywhere was tinged yellow, and under the microscope showed granules of bile salts.

#### PATHOLOGICAL REPORT.

There is general infiltration of the portal spaces, giving the appearance of a marked cirrhosis. Chronic passive congestion is seen in places, with fatty change in the liver cells, and increase of the connective tissue toward the centre of the lobules.

The sections show many large open spaces, presumably bile

ducts, the walls of which have been destroyed, leaving ragged, necrotic edges.

The abscesses vary in size, and, as far as can be seen, are always connected with the portal spaces. The bile ducts, in general, are dilated and devoid of their lining membrane, in one section, however, a large one was found with its cellular lining intact.

The abscess walls show a ragged, necrotic edge next the cavity, with nuclear fragmentation. Beyond this is a broad zone of infiltration, with polynuclear leucocytes in abundance, and increase of the connective tissue cells. Beyond this again, in some cases, there is a distinct filicous capsule. Over the more superficial foci there is a well marked perihepatitis.

#### BACTERIOLOGICAL REPORT.

At autopsy cultures were made in bouillon from the liver pus, peritoneum and heart's blood, and were plated in agar within one hour.

The pus from the liver was thick, tenacious and odorless, greenish yellow in color, with streaks of a darker yellow, due to bile coloring matter. Fresh specimens showed many polynuclear leucocytes and red blood cells, also larger cells with large, round, regular nuclei, and containing in their protoplasm granules, regular in outline, ovoid, yellow in color, and very infractive. Similar granules were found everywhere in the field lying free, and in some cases it was difficult to determine as to whether they lay upon or within the cell bodies. No protozoa were seen. Stained preparations showed many polynuclear leucocytes, but no bacteria.

By reason of the caseous appearance of the foci in the liver, preparations of pus were stained for tubercle bacilli, but were negative.

As a control test, several loops full of pus were inserted beneath the skin of the abdomen of a half-grown rabbit. The wound healed kindly, and the animal is still well—seven months after inoculation.

The agar plates—after 48 hours at 37.5 c.—presented many colonies, two of which seemed to differ. They were isolated, but proved to be similar.

The organism was a short, fairly thick bacillus, with rounded ends, freely segmenting. There were also longer and larger forms, with squarer ends.

*Motility.*—Very slight.

*Bouillon.*—Cloudy, stringy deposit.

*Gelatine.*—Free growth, but no liquefaction after many days.

*Agar.*—Diffuse, moist, greyish growth; free growth along the stab.

*Potato.*—Abundant moist growth of dirty, grey color.

*Litmus Milk.*—Decolorized and coagulated.

*Glucose agar.*—2 per cent. after twenty-four hours; free growth along the stab; abundant gas formation.

*Ludol* reaction—Distinct.

*Diagnosis.*—Colon Bacillus.

*Peritoneal Exudate.*—Stained specimens showed many pus cells, and bacilli, thick and fairly long, straight or curved, ends rounded, found in clumps, threads, and singly. They stain irregularly.

*Agar Plates* (48 hours at 37.5 C.) There was an abundant growth, and 5 colonies were isolated, differing in general appearances, coverslip preparations proved all to be bacilli, and subsequent examination on media showed them to be identical.

It was in all particulars, morphological and cultural, similar to that found in the liver.

*Heart's Blood.*—The bouillon culture was not plated till several days after its inoculation. The bacillus pyocyanous alone was found. The relation of this to the general infection may rightly be called in question, and probably has no bearing of interest upon the case.

In the literature on the subject there are several pathological conditions spoken of as resulting from infection of the upper bile passages. Catarrhal cholangitis is recognized by all, and the suppurative form frequently referred to. Chauffard speaks of dilations of the ducts as a result of the suppurating form, resembling abscess cavities, the duct walls being transformed into a true pyogenic membrane. This is the absces biliare of the French writers.

Labadie Lagrave has found minute abscesses in the submucosa of the duct wall opening into the lumen.

Chauffard further describes an ulceration of the duct wall with extension into the surrounding tissue producing the so-called periangiocholangitis or pericholangitis of Courvoisier. Von Ziemsson likens this to the peribronchitis seen in pulmonary tuberculosis. This is marked in the specimen presented. An extension deeper into the liver tissue results in abscess formation, the cavities being in direct communication with the bile ducts.

Again, there is the condition of miliary abscess of the liver, and upon this Courvoisier and Von Ziemsson dwell at some length. The foci are outside the duct walls, they may be numerous, and as

large as a bean. He quotes the case of Seuffel, in which there were many such, as clearly defined masses of necrotic liver tissue, from which appearance the condition was called "Hepatitis Sequestrans." No connection was found between the foci and the vessels or bile ducts.

Von Ziemsson describes this formation as a primary infiltration of small areas, with deposit of bile salts, then necrosis of the centre and suppuration around it, the contents become inspissated and form a soft plug. Any connection with the ducts is thought to be accidental. He suggests the name "Furunculosis Hepatis."

The same writer speaks of a more chronic cholangitis with increase of the connection tissue, there are dilatations in places and pouch-like formations containing calculi. Another form, somewhat similar, results in calcification of the duct walls.

A croupous inflammation is described by Rokitausky in which a whitish membrane is formed. The ducts become blocked with plugs of inspissated pus and bile salts, and dilatations may occur behind the obstruction.

Where ulceration of a duct wall has taken place and the patient has survived long enough cicatrization and stenosis of the duct occurs, but there is seldom opportunity for this.

Tubercular disease of the bile passages appears also to be a well recognized fact as shown by the writings of Tublet and Gaucher.

As to ætiology. There is a predisposing and an exciting cause. Biliary retention, from whatever cause, appears to be the most frequent predisposing factor, and calculi the most common cause of the retention.

Chaffard lays much stress upon biliary retention as a factor, and finds an analogy in the infection of the genito-urinary tract with retention of urine. The causes, he says, may be extrinsic—as tumors of the duodenum or head of the pancreas, or intrinsic—as new growths in the walls of the bile passages, and within the lumen of the ducts—as by impacted calculi, hydatid membrane, or lumbricoid worms.

From the experimental side there is confirmation of this point. Charcot and Gambault have produced biliary infection with angiocholitis and biliary abscess by ligating the common duct, and Netter found the bile septic (*staphylococcus aureus* colon bacillus) twenty-four hours after similar ligature.

Quite apart from retention, however, infection appears to take place. Hall White has reported a case complicating typhoid fever, without obstruction. Mayor Robson observed it as a complication

of influenza. It has also been found after cholera, yellow fever, pyæmia, puerperal septicæmia and dysentery. Calculi may give rise to it by direct irritation without producing obstruction. Not only have calculi been found in the lower bile passages, but in the intra-hepatic radicles, and within the cavities of secondary abscesses (Von Ziemsson.) Instances of cholangitis are also on record with calculi only in the gall bladder. It has been suggested that the calculi in some cases are the result of changes in the upper bile passages and not the cause.

In this specimen no obstruction is to be found, and no calculi were present, and we may infer that there was no obstruction—certainly of any great duration—as there was no jaundice. There were, however, attacks of abdominal pain very suggestive of the passage of calculi, and it is possible that they may have all passed *intra vitam*, and although there was no actual impaction, may there not have been sufficient trauma produced to open up an atrium for an ascending infection?

Infections of the biliary tract are most commonly of an ascending character. Chauffard refers to a descending or toxic infection, such as is seen in acute phosphorus poisoning, and an ascending or bacterial.

The bacteriology of the bile and bile passages has an important bearing on this matter. Normally these are sterile, save at the outlet, and in the ampulla of Vater, where Duclaux and Netter have found the colon bacillus and staphylococcus pyogenes aureus; and we know the duodenum, at the papilla, to be the natural habitat of a long list of organisms of greater or less virulence. The boundary line between the sterile and septic zones is not well marked, and no great barrier against infection, and the bactericidal property of the bile, formerly believed to be so great, is now called in question by many. It is found that the colon bacillus and strophycoccus aureus readily multiply in it, and Birch is of the opinion that any failure of organisms to develop is due more to a poverty of nourishing substances than to any bactericidal action, which at the most he believes to be slight.

Three modes of infection have been suggested (1) through the wall of the gall bladder, (2) by the blood and (3) the ascending infection. The first is looked upon as hardly possible; the second is improbable; and the last is that now generally accepted. A striking example of this is a case reported by Ferguson, of Chicago. He had operated for cholecystitis, and all went well for several days when all the signs of a general septicæmia developed, terminating fatally. Autopsy showed a diffuse suppurative cholangitis.

The organisms found in association with cholangitis are numerous. Among them may be mentioned the staphylococcus pyogenes aureus (Netter, Martha, Dupré, Girode, Frankel), staphylococcus albus (Dupré and Klebs), streptococcus pyogenes (Dupré and Malvoz), pneumococcus and staphylococcus albus (Girode and Gilbert), Typhoid bacillus (Gilbert, Girode and Dupré).

Dupré has also isolated a diplococcus, a diplobacillus, and an encapsulated bacillus, as yet unidentified, and the bacillus saprogenes liquefaciens. The bacillus coli conummis has frequently been found, and some writers uphold its causative influence very persistently. Mayo Robson says it produces an exudative inflammation in the bile passages and abscess. We know that its virulence varies greatly ; at one time it is harmless, at another it may produce a local abscess, and again a fatal septicæmia.

Chauffard and others think it plays an important part in biliary infections, equal to that of the pyogenic cocci in infections of the genito-urinary tract. It is, however, such a widely distributed organism that its presence in pathological conditions is often looked upon with suspicion, and especially so in post-mortem work, now that so much is said regarding the invasion of the body by organisms during the death struggle. Then again, the work of Barbacci on perforative peritonitis shows the tendency of the colon bacillus to overgrow other bacteria that have originally been present.

The same controversy has arisen over the bacteriology of appendicitis, the colon bacillus being the chief infecting organism, according to some writers. In a series of cases I have found a variety of bacteria present, the number depending upon the duration of the disease—the earlier the case the greater the number of species found. In several cases a streptococcus was almost overlooked by reason of the small size of the colonies. In a small proportion the colon bacillus alone was found. The ease with which some organisms—especially the streptococcus—may be overlooked in the presence of one growing so luxuriantly as the colon bacillus, must be apparent, in all methods of isolation. The point is that we find the colon bacillus in purulent inflammations, and in many cases find it alone.

As above stated, it can produce pathological conditions, so for the present we must abide by our findings.

The most important accompaniment of suppurative cholangitis is a general infection, said to be always fatal.

Endocarditis is frequent, and Netter and Martha have found the same organisms on the heart valves as in the bile ducts. Labadie-Lagrave speaks of purulent meningitis ; Courvoissier, of pylephlebi-

tis, phlebitis of hepatic vein, thrombosis of a branch of the hepatic artery with infarction, and perihepatitis with adhesion to surrounding viscera.

The abscesses secondary to cholangitis may vary from the size of a pea to that of a child's head (Frerichs). One the size of a hen's egg was present in a case complicating typhoid fever (Klebs). These may travel in almost any direction, and have been known to open into the peritoneum, stomach, colon, or duodenum, through the diaphragm into the pleural cavity, and into the abdominal wall. Of the cases due to lumbricoid worms, one opened into the lung, and another formed an abdominal fistula through which a worm was discharged.

In conclusion, I desire to thank Dr. H. B. Anderson for the privilege of studying this case.

## Clinical Notes.

### A CONTRAST OF TWO CASES OF TUBERCULAR PLEURISY WITH EFFUSION.\*

BY H. H. OLDRIGHT, M. B. TOR.,  
Assistant-Surgeon St. Michael's Hospital, Toronto.

THE two cases of pleurisy which I will describe are of interest both on account of the individual peculiarities of each, and from a comparison of the physical signs, the symptoms and the duration of the pathological processes.

In the first case, one of fibrinous pleurisy, the patient, an hostler, was exposed to cold and wet, causing through the reflex nervous arc a point of weak resistance to the bacillus tuberculosis or the pneumococcus; the former, I presume, as it is the most common cause, according to Strumpell, and also because there was no appreciable consolidation of the lung. The peculiarity in this case was that the vocal fremitus, bronchial breathing and vocal resonance could be felt and heard through the effusion which extended from the right nipple level to the base, and this may be accounted for by the compression of the lung as far as the bronchus, and the density of the fibrinous effusion, which clotted on being withdrawn, forming a firm greenish-colored jelly. The amount of fluid withdrawn was about three pints. This dense effusion transmitted the fremitus and breath sounds as readily as a consolidated lung.

We may eliminate pneumonia for two reasons, firstly the apex beat was displaced to the left of the left nipple line, and secondly, the amount of effusion would compress the lung up to the nipple level where the absolutely flat percussion note below this level ended, and the tympanitic zone and normal resonance above over the upper lobe began.

In the second case with serous effusion the peculiarity was in the paralysis of the right serratus magnus muscle, which came on some weeks after the last aspiration. (See page 153.)

\*Read before the Toronto Medical Society.



The points of note in comparing these two cases are that in the first with the fibrinous effusion there was great pain, which was absent with the serous effusion, there was no return of the fibrinous effusion, probably due to immediate adhesion of the pleural surfaces, while the other required four aspirations, and lastly the difference in the physical signs.

## CASE NO. I.

## HOSTLER.

Muscular system well developed.  
Fibrinous pleurisy.  
Intense pain.  
Profuse sweating.  
Appetite lost, markedly.  
Tapping on sixteenth day.

## Examination right side.

1. Vocal resonance, bronchial breathing heard and vocal fremitus felt through the fluid from nipple to base of lung.

2. Apex beat displaced beyond left nipple.

3. Percussion note flat.

4. Cough.

5. Edema of left lung slight. Relieved by tapping, and pulse fell from 130 to normal.

6. Fluid greenish, coagulated when withdrawn.

7. No return, and rales disappeared in left lung.

8. Duration of effusion two weeks.

9. Dulness from deposit of fibrin most marked.

## CASE NO. II.

## CLERK.

Muscular system well developed.  
Serous pleurisy.  
No pain.  
No sweating.  
Loss not so marked.  
Tappings on tenth day; 2nd, ten days later; 3rd, seventeen days later; 4th, three weeks later.

## Examination right side.

1. All breathing sounds absent to nipple level.

2. Apex beat displaced beyond left nipple line.

3. Percussion note flat.

4. Cough.

5. Edema somewhat relieved by tapping and pulse normal after.

6. Fluid, straw-colored in first two tappings, and slightly tinged with blood in the last two. No coagulation in first, slight coagulation in last two.

7. Rales persisting, but improving, also dulness over left base and hindered movement of chest in same region improving, due to infiltration.

8. Duration of effusions two months.

9. Persistent dulness on right side from thickening of pleura. Paralysis of respiratory nerve of Bell, long thoracic. Serratus paralysis.

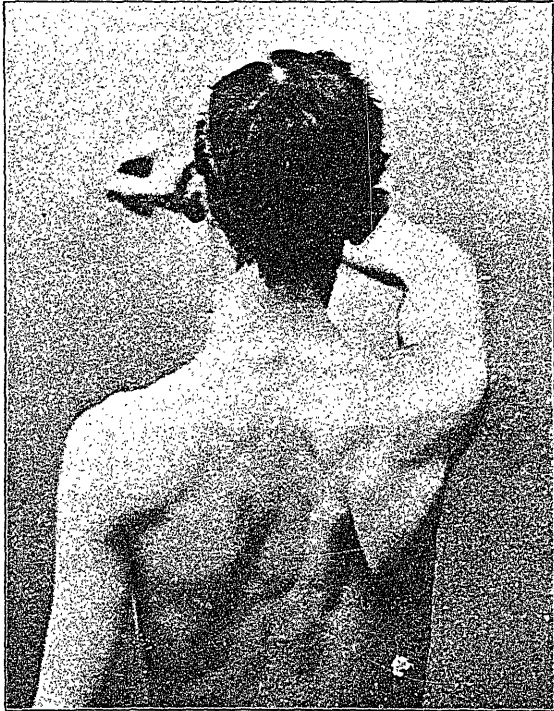
Case No. II.: Noticed paralysis of right serratus first three months after onset of illness and six weeks after last tapping. He had difficulty in raising right arm above the shoulder level without help from the left, and had to grasp something to maintain the elevated position with ease. Right serratus magnus atrophied. Scapula winged. All other muscles normal. My first impression was that mentioned by Treves, namely, that the lower angle of the scapula had escaped from under the latissimus dorsi. Strumpell

says it is common, and generally with porters and soldiers. Aetiology—trauma, cold (rheumatic), infectious diseases (typhoid), progressive muscular atrophy (one symptom.)

Prognosis—recovery tedious, several months—some cases incurable.

Treatment—electricity.

In the discussion following this paper the members of the Society thought that a neuritis, resulting from puncture of the nerve, could



be eliminated, as the lesion must have been higher up than the seventh rib. Dr. H. Parsons suggested that there may have been extension of inflammation from the pleura, causing a neuritis in the long thoracic, analogous to that producing mastitis in cases of pleurisy, and this would seem to be the best explanation.

Case No. I. has entirely recovered from a slight cough following the pleurisy.

Case No. II. has fibroid phthisis and has gone south to Asheville, N. Carolina, from which place, I am sanguine, he will return recovered.

# Progress of Medicine.

---

## OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto. Obstetrician to  
the Toronto General Hospital

AND

H. T. MACHELL, M.D.,

Surgeon St. John's Hospital and Victoria Hospital for Sick Children.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children and St. John's Hospital.

---

### HYPEREMESIS GRAVIDARUM AND SALT IN FOOD.

Antonchevitch (*La Gynécologie*, October 15th, 1897) sees a strict homology between uncontrollable vomiting of pregnancy, and vomiting from which animals suffer when deprived of salt in their food, being fed on albumen artificially deprived, as much as possible, of potassium and sodium salts. He has, therefore, dieted women suffering from hyperemesis gravidarum by taking care that their food contains at least a full proportion of salts.—*British Medical Journal*.

---

### RETAINED PORTIONS OF PLACENTA.

The indications for the removal of a small piece of placenta or membrane need not be a foetid lochia, nor a temperature, nor a rapid pulse, which symptom complex is usually associated with a sapræmia, but a severe degree of after-pains, a subinvolted uterus and a persistent bloody lochia is quite enough evidence to the careful observer to demand an exploration.

S. MARX.

---

### THE HAND IN OBSTETRICS.

The hand as a dilating agent is the best obstetrical instrument at our disposal—better than Barnes' bags and the instruments which

have come to us from the French school. As a result of extended experience, I am still able to say that in ninety-eight per cent. of all cases, the woman being within six weeks of full term and under surgical anæsthesia, any man can dilate the cervix with his hand sufficiently to enter the uterus and extract the child.

EGBERT H. GRANDIN.

---

The use of the hand in obstetrics is of the utmost importance. For purposes of dilatation, examination and manipulation, the hand is the obstetrician's instrument.

C. A. VON RONDOLER.

---

#### OCCIPITO-POSTERIOR PRESENTATIONS.

In *occipito-posterior* presentations it is important to pass the hand into the vagina when the diagnosis is not clear; and the best landmark is the ear, the direction of the flab showing that of the occiput.

R. L. DICKINSON.

---

#### SEPSIS AND TRAUMATISM.

Is sepsis everything? Is traumatism nothing? What causes the death of the woman who perishes on the operating table or in the obstetric bed twenty-four hours after labor? Does anyone mean to say that within twenty-four hours germs have entered that woman's system and killed her? No! It is traumatism which has killed her and this traumatism we must avoid.

MALCOLM MCLEAN.

# LARYNGOLOGY AND RHINGOLOGY.

IN CHARGE OF

PRICE-BROWN, M.D.,

Laryngologist to Western Hospital : Laryngologist to Protestant Orphans' Home.

---

## DIAGNOSTIC SIGNIFICANCE OF LARYNGEAL ABDUCTOR PARALYSIS.

Sir Felix Semon (*Brit. Med. Jour.*, Jan. 1, 1898), in a lecture delivered at the National Hospital for the paralyzed and epileptic, gives us the result of his diligent and painstaking investigations upon this subject. After referring to the contentions among anatomists and pathologists of the present century, concerning the origin of the nerve supply of the abductors and adductors of the larynx, he gives a detailed statement of the conclusions derived from his own physiological and pathological investigations.

The motor nerve par excellence of the larynx is the recurrent laryngeal. Whether the entire motor supply has this origin or not he considers not definitely settled. Possibly some innervation may be derived from the spinal accessory. One point he lays stress upon—the fact that Risien Russell has succeeded in splitting up the recurrent laryngeal nerve throughout its peripheral length into three different bundles of fibres, one of which supplies the adductors, another the abductors, while from the third no motor effect can be produced in the larynx. Hence the fibres supplying the antagonistic groups of laryngeal muscles are differentiated throughout their course. Those which supply the abductors of the vocal cords are situated on the inner side of the recurrent laryngeal nerve.

Sir Felix takes issue with the idea usually taught in text-books, that the vocal cords, during respiration, make excursions synchronous with the respiratory movements of the thorax; that is, they widen during inspiration and narrow during expiration. He claims, basing his conclusions on a great number of examinations, that in a large majority of cases, the isosceles triangle which the vocal cords form during breathing, varies little or nothing during the two phases of respiration.

He then makes a note of the difference between the "common respiratory position" of the vocal cords and the "cadaveric position." The width of the glottis in a healthy adult man during quiet respiration is  $13\frac{1}{2}$  millimetres; whereas after death the maximum width ever seen in man is only 6 millimetres, and in woman 5, the average in man being 5 and in woman 4.

The question arises, Why should there be so much difference between the physiological condition of respiration, in which neither abductors nor adductors are called into action, and the cadaveric position, in which the same sets of muscles are pathologically at rest?

The answer is that nature has endowed the abductor muscles with a tonus, by means of which the glottis is kept sufficiently open for ordinary breathing, which would not be the case in the cadaveric position. This tonus is produced by certain centripetal fibres, contained mainly but not exclusively in the trunk of the pneumogastric, which are stimulated by the interchange of gases in the lungs during respiration. The impulse is carried by the fibres to the medulla, and from there transmitted through the recurrent laryngeal to the abductor muscles. Perhaps Risien Russell's third bundle of fibres perform this special tonic function.

Up to the year 1876 it was supposed that the abductor or adductor muscles might either of them become affected, from lesion of the nerve supply, to the exclusion of the opposite groups. And that in other cases the central lesion might be so general as to affect all the motor nerves of the larynx, inducing paresis of both abductors and adductors at the same time.

Since that period, opinions based on clinical research have undergone a material change. Now it is known that in paralysis of the larynx, the abductor muscle, the posterior crico-arytenoid, is always the one first affected; and that the term paralysis of the larynx, as usually applied, signifies paralysis of one or both abductor muscles; and that when paralysis of the adductors does occur, it is always secondary to primary paralysis of the abductors, except in cases where the lesion is complete at once, as in section of the recurrent nerve.

Semon summarizes this conclusion as follows: "Whilst there is not a single authenticated case on record in which it has been shown by post-mortem examination that in a slowly progressive organic lesion of the motor nerves of the larynx, the adductors had been primarily or exclusively affected; we are now in possession of quite a number of well observed cases demonstrating the opposite order of events."

The author adduces another curious fact, that although in general paralysis of the larynx, the abductors are always affected first, when recovery occurs, the adductors lead the way. The reason assigned is, that from some cause, still unknown, the abductors are much more vulnerable to nervous influence than the adductors. The truth of this conclusion is illustrated by a series of pathological facts.

The next point taken up is the effect of this abductor paralysis upon the vocal cord. In the first stage, the effect would be that while at rest, the affected cord would be in the cadaveric position, and that during phonation the adductor muscles would draw it to the mesial line. Consequently the voice would be normal and likewise the breathing owing to the wide dilation of the unaffected side.

Eventually the tension of the adductor muscles, having no resistance, would draw the cords permanently to the centre, making complete abductor paralysis of the affected side. Even here the voice would be normal, and the breathing but slightly, if at all, affected during ordinary respiration.

In cases where adductor paralysis follows that of the abductor muscle, the compensatory forces come into play, and the unaffected vocal cord, sweeping past the mesial line and joining its fellow, will admit of proper vocalization.

Consequently, as paralysis of the larynx is usually only unilateral, there is in these cases absolutely no sign which would draw attention to the larynx. When it does occur, it usually arises from some pathological condition extraneous to itself. Hence the importance of laryngoscopic examinations can scarcely be overestimated. Whenever a thoracic, a pharyngo-laryngeal, or a cerebral case is of that obscure nature that it cannot be readily diagnosed, laryngoscopic examination is certainly advisable, and in many cases imperative.

The author gives a long list of central and peripheral affections which may give rise to laryngeal paralysis, among which are tumors, aneurism of the aorta and thoracic arteries, tuberculosis, malignant disease.

# GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D. Tor. L.R.C.P. Lond.,

Surgeon to St. Michael's Hospital; Physician to House of Providence and Home for Incurables; Pathologist, Toronto General Hospital.

---

## ONE OF THE EVILS OF INCOMPLETE COITUS.

Under the name of a cardiac neurosis of sexual origin, Kisch, of Prague (cited in the *Presse médicale* for July 10th), describes a set of symptoms that he has observed in certain nervous young women whose husbands made it a practice to withdraw just before the instant of ejaculation, leaving them over-excited and unsatisfied. The physiological tachycardia of coitus, he says, becomes particularly intense in such women, and assumes the form of very distressing palpitation which at first persists for some time after each incomplete copulation, and after a while occurs during the day, repeatedly and without appreciable cause. For a time this palpitation is the only manifestation of the neurosis, but soon the clinical picture is completed by a feeling of anguish, headache, vertigo, syncope, and general weakness. The women are depressed and irritable; they weep on the slightest occasion, and take a gloomy view of life. The appetite is impaired, digestion becomes difficult, and they are constipated. The pulse is small, soft, and accelerated, often intermittent and arrhythmical. The arteries, however, are supple, and auscultation of the heart discloses nothing abnormal. All these symptoms will disappear as by enchantment when the practice on which they depend is given up.—*N. Y. Medical Journal*.

[NOTE.—We do not recall any cases as severe as those related above, but have seen many cases of nervous disturbance produced by the same cause. We have seen severe nervous, cardiac, and gastric symptoms produced in the male from the identical cause. Gastric disturbances are quite common in those persons who are guilty of abnormal or incomplete sexual indulgence. In one case that we recall a very intense exfoliative enteritis was developed subsequent to gastric disturbance from the above cause.—E. E. K.]



THE TREATMENT OF GONORRHEA WITH A NEW SILVER PREPARATION, PROTARGAL: PROLONGED INJECTION.

Protargal (by Prof. A. Neisser, Breslau *Dermatologisches Centralblatt*, October, 1897), is a silver-protein compound containing 8.3 per cent. of the metal. It has the peculiar property that it is not precipitated by albumen, or diluted hydrochloric acid. This property is of importance, inasmuch as it permits of a greater penetration into the tissues than can be obtained with the other silver salts.

Prof. Neisser looks upon protargal as a valuable preparation in the treatment of gonorrhœa. He has never had such uniform, good, sure, and even rapid results as since the use of this medicament. He begins with a 0.25 per cent. solution and increases rapidly to 0.50—1.00 per cent. concentration. The injection is to be used thrice daily, the fluid, being retained the first two times for five minutes and the third time for thirty minutes. The author lays stress upon the value of prolonged injection.

[NOTE. —We have been unable to procure protargal in this country, but the treatment by the silver compounds that do precipitate the chloride, nor coagulate albumen, have given us most gratifying results. Argonin is better than argentamine. We hope soon to be able to try protargal and will note the results.]

---

SOURCES AND DIAGNOSIS OF PYURIA.

Dr. Lewis S. McMurtry, of Louisville, Kentucky, in discussing a paper read by Dr. Howard A. Kelly entitled as above, says: "In the first place the subject presented by the essayist is not so novel as might at first appear. Diseases of the female bladder and urinary tract have been studied for years by Bozeman, Emmet, Skene, Simon and Pawlik. The published results of these investigations have illuminated the subject so that the diagnosis and treatment of diseases of the female bladder and urinary tract are now upon a scientific basis. Exploration of the bladder by endoscopy and of the ureters by catheterization has been made practicable by Prof. Pawlik, and the method modified and popularized in this country by Dr. Kelly. As a diagnostic resource the method described by the essayist has certain definite value, but in my judgment, its scope in practical therapy is almost *nil*."

[NOTE.—As a diagnostic measure it is of value, but as a therapeutic measure, a delusion. We resort to these difficult and, in inexperienced hands, dangerous proceedings with too much freedom.]

# PEDIATRICS.

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P., Lond.,

Lecturer on Clinical Medicine and Diseases of Children, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College

AND

W. J. GREIG, B.A., M.D.

---

## ACUTE ABDOMINAL DISTENSION IN CHILDREN.

Dr. George F. Still, Great Ormond Street Hospital, in Pediatrics for September 15th, 1897, says that this condition occurs as a late complication of diseases, not primarily attacking the digestive tract, and common with broncho-pneumonia. While not necessarily a fatal complication, it certainly is a dangerous one and often hastens death. He relates five cases, one of which recovered. He gives *post-mortem* report of the other four, showing in photograph first the abdominal distension, and second the visceral distension after opening the cavity. In one case the distension was in the ascending and transverse colon, in a second in the small intestines, and in the third in the stomach. It should be vigorously combated by position, passing tubes, and by creosote.

---

## GANGRENOUS VULVITIS AFTER MEASLES.

John A. Larree (Pediatrics, October 1st, 1897) in the course of an article on Measles reports one case of a babe in which this complication occurred. Other children in the house had measles but this babe had none of the usual symptoms. Depression of spirits, painful micturition, vulvo-vaginitis, death from sepsis in collapse in five days was the sequence of events. *Post-mortem* showed gangrene of the internal parts connected with the vagina up to the uterus; blebs with sloughing extended above the mons veneris. Different varieties of cocci resembling diplococci were found, but nothing pathogenic. This condition is described by Holt, as Gangrenous Vulvitis (noma).

ACUTE ARTHRITIS AND EPIPHYSITIS OF INFANTS AND  
YOUNG CHILDREN.

Frederic Eve, F.R.C.S. (in *Pediatrics*, October 15, 1897) has an article on this subject. He includes under this head arthritis secondary to osteo-myelitis at the extremity of the diaphysis, close to the epiphysial disc, arthritis secondary to a tubercular lesion in the bone at or near the epiphysis and suppurative arthritis due to a syphilitic epiphysitis.

The importance of early diagnosis is dwelt on and treatment given which is practically that of an abscess, gouging out the osseous lesion and applying pure carbolic acid.

CONTRIBUTIONS OF BACTERIOLOGY TO THERAPEUTICS. THE WESLEY M. CARPENTER LECTURE FOR 1897, BY WM. H. PARK,  
(*PEDIATRICS*, NOV. '97.)

*Tetanus antitoxin* is very valuable as an immunizing agent against possible infection in cases of lacerated wounds or before serious operations in localities where tetanus is not infrequent. Its power in these cases is marvellous and certain. In acute cases developing within a week and running a course of 48 or 72 hours, as a treatment it is of very little value, but when the incubation is longer and the course more sub-acute benefit will follow its use. Along with the usual treatment it should be given in doses of 20-50 c.c. twice daily and beginning at the earliest possible moment.

*Diphtheria*.—The results of the antitoxin treatment are so well-known that the writer's conclusions need not be repeated.

*Diseases due to the Pneumococcus*.—These are pneumonia, pleurisy, pericarditis, endocarditis, abscess, cerebro-spinal meningitis, etc. The author does not think that the serum is of any practical value in the treatment of developed pneumococcus infection; nor does he think that it ever will be. It, however, is harmless and there is no objection to its use.

*Streptococcus infections*.—His conclusions are: The preparations of anti-streptococcic serum now on the market are either quite weak or entirely wanting in curative substances. We are justified in using serum only when it has been recently tested and shown to have some value in preventing infection in animals. The serum preserves its strength only for a short time.

*Treatment of malignant tumors by the mixed streptococcic and prodigious toxins*.—Only very temporary improvement follows their use in carcinoma. In spindle-celled sarcoma the result of the

treatment has been excellent, in rounded celled, not so good, and in melanotic, the action is the least marked.

*New Tuberculin.*—The benefit from this in treatment has not yet been estimated because the samples used have been found to be contaminated. In some vials living and virulent bacilli of tuberculosis were found, which when injected into animals caused tuberculosis.

*Hydrophobia.*—The treatment for this disease is still sub-judice, though it is claimed that the percentage of cases developing hydrophobia after bites from rabid animals is very much less in those treated than in those not. A few cases have, however, developed the disease while under the full influence of the serum.

Altogether the article is valuable.

# HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

**WILLIAM OLDRIGHT, M.A., M.D. Tor.,**

Professor of Hygiene in the University of Toronto; Surgeon to St. Michael's Hospital

ASSISTED BY

**J. W. SMUCK, M.D.**

## REPORT OF PROVINCIAL BOARD OF HEALTH FOR JANUARY, 1898.

Monthly Report issued by the Provincial Board of Health, showing the deaths from contagious diseases in the Province as reported to the Registrar-General by the Division Registrars throughout the Province for the month of January, 1898.

Total population of the Province, 2,263,492. Total population reporting, 1,536,825, or 67%.

	Population.	No. of deaths and rate per 1,000 per annum.						Total.
		Scarlatina	Diphtheria.	Measles.	Whooping Cough.	Typhoid Fever.	Tuberculosis.	
Cities reporting. 13 (100%)	432,675	4 (0.1)	15 (0.4)	2 (0.05)	3 (0.08)	5 (0.1)	62 (1.7)	91
Towns and vil- lages, 236. Reporting, 187 (80%)	343,572	3 (0.1)	7 (0.2)	0	0	3	27 (0.9)	40
Townships 496. Reporting, 382 (77%).	760,578	9 (0.1)	29 (0.4)	2 (0.03)	5 (0.08)	5 (0.08)	57 (0.9)	107
	1,536,825 (67%)	16 (0.1)	51 (0.4)	4 (0.03)	8 (0.06)	13 (0.01)	146 (1.1)	238

## SOIL DISTURBANCE AND MALARIAL FEVER.

*The Indian Medical Record* for December 16th contains an article by Dr. R. R. H. Moore, of Jalapahar, Darjeeling, on this subject. Disturbance of the soil, he says, has come to be regarded

as a frequent cause of malarial fever. In the extensive construction of canals and railroads frequent outbreaks of malarial fever occur, but is it not more likely that the cause is the waterlogged condition of the soil due to the subsoil drainage being interfered with, and not to the soil disturbance? Dr. Moore cites two instances of outbreaks of malarial fever occurring in France, reported by Dr. Botre and Dr. Evard, said to be caused by the extensive disturbance of the soil in constructing railways.

When agricultural colonies are founded in Algiers these outbreaks occur. M. Armand, in his very able work, *L'Algérie Médicale*, explains this as being due to the hardships endured from defective food, less refreshing sleep, exposure, more continued and more direct, the vicissitudes of the climate, to which the rising colony is exposed during the ednemio-epidemic season.

"Considering that the fact of being in camp all the summer has a deteriorating effect upon the health of the men, even when no work is done, how much more will the effect be felt, when all the fatigue attending the establishment of a colony has to be encountered!"

"The work of installation and construction does not involve as much disturbance of the soil as the subsequent tillage of the land, yet it is during the first summer that the state of the men's health is least satisfactory."

The same statement applies to the troops in the early days of Hong-Kong, and as in Algiers, the greatest amount of fever did not correspond with the greatest amount of soil disturbance, a point indispensable if the two things are to stand in the relation of cause and effect, while in all cases the men were living under conditions of great exposure and badly housed.

There are, then, three distinct classes in which all the cases where soil disturbance has been accused of causing malarial fever, may be placed:

1. Where the disturbance of the soil has interfered with subsoil drainage and caused a marsh or an allied condition.
2. Where outbreaks of fever have been co-incident with works executed in the soil, but not due to the simple disturbance of the soil.
3. Where malarial fever has been caused by a specific poison, released and brought into evidence by the breaking up of the soil.

Of cases falling in the first category there are plenty, but Dr. Moore says it is a misnomer to speak of them as caused by soil disturbance.

Of the second class there are also plenty; they belong to the

type of a gentleman contracting the fever by digging in his garden. These cases are valueless.

That malarial fever is caused in the manner specified in the third category there is not sufficient evidence to show.

---

#### DISINFECTION BY FORMALDEHYDE VAPOR.

Dr. Hans Aronson (*Zeitschrift für Hygiene und Infectious Krankheiten*, June, 1897) summarizes investigations to date upon the antiseptic properties of formaldehyde. Various methods of disinfection by utilizing the penetrating powers of formaldehyde gas upon a large scale have been proposed. Aronson finds most of them objectionable; including in this category all attempts at vaporization by means of heat from commercial solutions of formaldehyde in water, or from solutions in methylated alcohol, and attempts to develop the gas directly by heat applied to wood alcohol in lamps of various devices.

Of all methods he prefers that of Schering, which utilizes the solid polymerized formaldehyde (paraformaldehyde or paraform) in the shape of pastils weighing one gramme each. These being exposed to heat in lamps of proper construction, the heated gases of combustion convert the paraformaldehyde again into formaldehyde gas, which becomes thoroughly mixed with them, and with them is distributed into all portions of the place to be disinfected; the necessary moisture being likewise supplied by the combustion. In a room of about 100 cubic metres (3,500 cubic feet) content (25 feet x 13 feet x 10 $\frac{3}{4}$  feet), he placed test objects at different levels. The microbes used were staphylococcus, streptococcus, bacillus pyocyaneus, typhoid, diphtheria, and tubercle bacilli and anthrax spores. It was found that one lamp containing 100 pastils (one pastil per cubic metre—35 cubic feet) was sufficient to destroy all germs but anthrax spores. For this 200 pastils sufficed.

It made no difference where the test objects were placed or through how many thicknesses of material the vapor had to penetrate. Even the scrapings of dust were sterile. The necessary number of pastils were placed in the apparatus, the lamp lighted, and the room closed for twenty-four hours. A strong odor of formaldehyde perceived on entering was quickly dissipated by opening the windows.

## Editorials.

---

### NEW EMERGENCY HOSPITAL IN TORONTO.

---

THE trustees of the Toronto General Hospital have decided to establish a branch, which will be known as an Emergency Hospital, in the southern portion of the city. A great portion of the most serious accidents occur in the vicinity of the railways and neighboring manufacturing establishments, and the hospital authorities desire to have a branch in that locality where people suffering from accidents can be admitted and temporarily treated. Dr. Charles O'Reilly has recently visited New York and Buffalo and investigated the systems which prevail in the Emergency Hospitals in those cities. The building selected for Toronto's new Emergency is admirably situated on Bay street, a few doors north of King street. No better situation for the purposes intended could possibly be chosen. The necessary alterations to the building are now being made, and will be completed in a short time.

---

### DOCTORS IN THE ONTARIO LEGISLATURE.

---

WE are somewhat disappointed with the results of the recent elections as far as the medical candidates were concerned.

There were nineteen physicians in the field ; and, of these, we had hoped that at least one-half would be successful. According to the returns at the time of writing we find that only seven have been elected, as follows : Drs. Barr, Dufferin ; Bridgeland, Muskoka ; Jamieson, South Grey ; Jessop, Lincoln ; McKay, South Oxford ; Lackner, North Waterloo ; Pyne, Toronto. The following were defeated : Drs. Fell, East Algoma ; Mitchell, West Durham ; Hall, West Kent ; McLeay, East Lambton ; Preston, North Lanark ; Meacham, Lennox ; McWilliams, East Middlesex ; Willoughby, East Northumberland ; Clemens, North Waterloo ;



Coughlin, East Wellington ; Spence, West Toronto ; McKay, Victoria West.

If we classify them according to politics, we find twelve Conservatives : Drs. Barr, Jamieson, Jessop, Lackner, Pyne (returned). Fell, Hall, McLeay, Preston, Meacham, Willoughby, Coughlin (defeated), and seven Liberals : McKay, Bridgeland (returned), Mitchell, McWilliams, Clemens, Spence, McKay (defeated). Thus it will be seen that of twelve Conservatives five were elected, and of seven Liberals two were successful.

There were in the last Parliament seven physicians ; and, of these, only one, Dr. McKay of Oxford, will sit in the new House. Of the remaining six, two, Drs. Baxter and Ryerson, did not stand for re-election ; while four, Drs. McKay of West Victoria, Meacham, Preston and Willoughby, were defeated. Of the seven in the last House, there were four Conservatives and three Liberals ; of the seven in the new House, there will be five Conservatives and two Liberals.

From a professional point of view the loss of such men as Baxter, Ryerson, Willoughby and Preston is serious. On many occasions they did good work in defending us from unwarranted attacks of free-traders and free-booters who desired to destroy certain safeguards which had been erected in the interests both of the public and the profession. Many a time has McKay of Woodstock proved himself a sturdy and worthy champion of equity and justice in things medical. Right glad are we to know that he is remaining in Parliament.

Under the circumstances, we consider it extremely fortunate that Dr. Pyne has been elected. His intimate knowledge of medical matters in Ontario, combined with his good judgment and (that rare virtue) common sense, make him eminently fit to represent our profession in the Provincial Parliament. He will undoubtedly occupy a leading position in his party, and his political friends expect that he will be a member of the new Government which is to be formed in the near future. Others think that Dr. McKay will soon be made a member of the old Government, which may exist for several more months. Without showing now any preference, we desire to say we hope it will be one or the other. Apart from ordinary provincial politics we may add that, as far as things purely medical go, McKay and Pyne will make a fine team ; and we have every reason to believe that they will have the hearty co-operation of Barr, Bridgeland, Jamieson, Jessop and Lackner, if called upon to fight any battles for the profession.

## THE REEVE SCHOLARSHIP IN MEDICAL SCIENCE.

---

**D**R. R. A. REEVE has donated a sum of money to the University of Toronto for the purpose of providing a Scholarship of the value of \$250, to be awarded annually for four years. The Scholarship is designed to foster the spirit of original research and to promote the utilizing of the Laboratories of the University for that purpose.

The conditions on which the Scholarship will be awarded are as follows :

The Scholarship will be awarded to the candidate who shall have gained the highest standing at the Final Examination in Medicine in the University of Toronto in the following subjects : Medicine and Clinical Medicine, Surgery and Clinical Surgery, Obstetrics, Pathology.

The candidate shall agree to devote himself during the next ensuing year, under the direction of the Medical Faculty, to research work in the Physiological or Pathological Laboratory of the University, and also to act as Laboratory Assistant.

A report of the research, when completed, is to be given to the University, whose property it shall become ; and it shall be published at the discretion of the University Council.

The Scholarship is to be paid in two portions, one-half on October 1st and one-half on February 1st.

The winner of the George Brown Memorial Scholarship shall not be eligible.

---

## THE INTERNATIONAL ASSOCIATION OF RAILWAY SURGEONS.

---

**T**HE next meeting of this association will be held in Toronto, July, 6th, 7th and 8th, 1898. Dr. Bruce L. Riordan, who is chairman of the Committee of Management, is working very actively in the interests of the meeting, which, it is expected, will be a large one—between 500 and 600, some say. The society has a very large membership composed of railway surgeons in the United States, Canada and Mexico. It is said that every railroad in North America will be represented by its official surgeon or by proxy at the coming meeting. During the past four years the regular annual meetings were held in Chicago, St. Louis, Denver and Galveston. Among those who have been honored in the association are Dr. James Thorburn, of Toronto, who is a past president ; Dr. Riordan, of Toronto ; Dr. Bruce Smith, of Hamilton, and the late Dr. E. A.

McGammon, who are past vice-presidents, and Dr. Hutchinson, of Montreal, who is now first vice-president.

A deputation, composed of Drs. Riordan, Pyne and Thorburn, waited on the Board of Control of the Toronto City Council and asked for the co-operation of that body in receiving and entertaining the visitors. We understand that a large number of the profession in Toronto and surrounding country have agreed to assist the local committee in making the necessary arrangements for the meeting, which is likely to be the largest medical gathering ever held in Ontario.

It is expected that there will be a formal reception on the first evening when the Lieutenant-Governor, Mayor Shaw, and others will welcome the visitors. The President will then deliver the annual address. On the second or third day of the meeting the committee of arrangements expect to take the members out on a steamer for a short sail, after which they will attend a garden party on the grounds of the Royal Canadian Yacht Club. On the day following the meeting it is hoped that a special train will be placed at the disposal of members to bring them to Gravenhurst, where steamers will be prepared to take them for a trip on some of the Muskoka lakes.

---

### LEPROSY IN THE HAWAIIAN ISLANDS.

---

WE find a very interesting article in *The Cosmopolitan*, for March, entitled "Shall we annex Leprosy?" That most loathsome of all diseases, leprosy, is prevalent in the Hawaiian Islands to such an extent that it is estimated that about five per cent. of all the inhabitants are lepers. Efforts have been made to arouse among the natives some intelligent appreciation of the importance of using means to prevent contagion, but, thus far, without effect. The writer in the article referred to says: "They will smoke the pipe of the leper, eat poi from his calabash, sleep in his bed, and wear his clothes. They become neither disgusted with his distorted and swollen features, nor afraid of becoming infected with the disease. They seem perfectly indifferent to the risk of contagion."

The Hawaiians, in 1865, took certain steps towards centralization and separation of leprosy, and empowered the Board of Health to seize the victims of the disease and remove them to certain leper settlements, of which the largest is the town of Kalaupapa, on the north coast of Molokai. With reference to the

collection of the victims we are told: "The woe of those who were taken, the dismay of those who were left and the agonized partings when friends clung to the swollen limbs and kissed the glistening bloated faces of those who were exiled from them forever, formed a scene which, once witnessed, was never to be forgotten; and yet it is still a common one in the Islands. None ever returns from that home of hideous disease and slow-coming death. It is a community of doomed beings, socially dead \* \* condemned to watch the repulsive steps by which their fellows go down to a loathsome death, knowing that they too must pass by the same way."

It is quite probable that much of the leprosy which exists in Canada and the United States has come from these islands. We have a good right, therefore, to take considerable interest in the steps which are being taken to enforce the laws which were enacted in 1865. For many years so many of the officers connected with the Board of Health were natives having no respect for the laws that the Government physician generally found it impossible to apprehend the lepers until they were too bad to be removed. In 1887, the Government took steps towards a more rigid enforcement of the laws, appointing a new physician, and replacing native officers by white sheriffs. The efforts of the Board of Health under the new regime have been much more effectual in the way of segregation.

The fourteen hundred lepers on Molokai "compose a regularly organized community. They have a court with a leprous judge, a store with a leper keeper, leper officials, hospitals with many leper nurses (some of them are not), a school with a leper teacher, and a church with a leper pastor. Their marriage laws are much like those of other communities, and there are forty children among them who have leprous parents, yet show no signs of the dread disease themselves."

# Meetings of Medical Societies.

## TORONTO CLINICAL SOCIETY.

THE regular meeting of the society was held on the 10th of March in St. George's Hall.

Dr. Albert A. Macdonald, president, occupied the chair.

There were present the following fellows: W. H. B. Aikins, G. S. Ryerson, Allan Baines, J. A. Temple, Edmund E. King, Albert A. Macdonald, Harold Parsons, Herbert Bruce, Elliot Brown, George A. Peters, Bertram Spencer, Alton Garratt, George Bingham, Geoffrey Boyd, Charles Trow.

The minutes of the last meeting were read and adopted.

### SYNDACTYLISM.

Dr. W. H. B. Aikins presented a case showing the above condition in a man aged thirty-two. The fingers involved were the ring and middle of each hand. The patient had a cousin with a similar deformity.

Dr. George A. Peters presented a patient who had recovered from a compound fracture of the skull with loss of brain substance, with the following history: H. McM., æt. eight years, was admitted to hospital September, 1897, with a history of having been injured through being knocked down by a running horse. He reached the hospital two hours after the accident. On examination a wound about  $\frac{1}{2}$  inch long was found on the right side of the head. Its exact situation was  $\frac{1}{2}$  inch from the middle line and  $\frac{1}{2}$  inch in front of a line dropped vertically through the external auditory meatus.

Brain substance could be seen oozing from the wound, and pulsation could be detected; a deep depression in the vault of the cranium could be felt subtending the wound. He was conscious but somewhat somnolent, only rousing on being spoken to sharply or loudly. So far as could be learned he had never completely lost consciousness. There was complete paralysis of the left arm. The left leg and face retained power of movement.

The diagnosis of compound depressed fracture of the outer area having been made, preparations were made to raise the depressed bone. Guarding the actual wound with a compress soaked in 1—20 ac. carbolic, the whole scalp was shaved and disinfected in the usual way.

*Operation.*—A crescentic incision, convexity upwards, with a radius of  $1\frac{1}{2}$  inches, was made so as to include the wound, and the scalp over the whole of the depressed area was raised.

The depression was found to be oval in shape and about  $1\frac{1}{2}$  inches in its longest diameter. It was outlined at its margin almost all round by a fissured fracture of the outer table, and from this fissure numerous lines radiated to the centre, which was about a half inch below the general surface of the skull. There was a small amount of brain substance oozing from the centre of the depression. One of the small triangular pieces of bone was removed, and through the opening thus produced the remaining fragments were sprung back to their normal level. The fragment first removed was then replaced. The whole wound was then closed by horsehair sutures, a small drain of iodoform gauze being placed in the original wound.

The temperature the next morning rose to  $102\frac{1}{5}$  and pulse to 124. By night the register was  $101\frac{4}{5}$  and 114. Next morning 98 and 94. The subsequent history showed rapid recovery. The wound healed throughout by first intention, but the paralysis of the arm was recovered from very slowly. In about one month, however, all the motions were recovered except extension of the wrist and of thumb and fingers, and these motions are still imperfect, though gaining slowly.

The flexors of the hand are also weak. At present he is able to extend the wrist while the fingers are flexed, or to extend the fingers while the wrist remains flexed; but not to perform both movements at once. The reason for this apparently is that the extensors are incapable of successfully overcoming the tonic contractions of the flexors, while the latter are put upon the stretch by extending both the wrist and fingers.

The treatment has consisted in exercises, in voluntary movements, massage, electricity, and the functions are still slowly improving.

It is evident that the portion of the cortex that was destroyed is the area which normally presides over the movements of extension of the wrist and fingers. Horsley and others have shown that while there are certain well-defined areas which control certain movements, there are frequently outlying areas which seem to have a subsidiary

influence, and may become functionally in the event of destruction of the main centres. In this case it is to be hoped that these subsidiary centres may prove adequate to the performance of the duties thrust upon them by the destruction of the main centre. This patient has youth in his favor, and it is certain that the powers of adaptability are greater in immature than in fully matured brains.

In the meantime it is important to maintain the nutrition of the nerves and muscles by electricity and massage.

It was Hippocrates who said that no injury of the head is too trivial to be despised or too serious to be despaired of. Injuries to the brain produced by heavy blows or falls upon a broad surface are apt to be productive of a certain amount of bruising and laceration at the seat of injury, together with a greater amount of injury of the cortex at a point diametrically opposite. The explanation is that the blow starts a wave in the semi-fluid brain tissue which breaks violently against the bone opposite, thus producing a bruising and laceration of the cortex at that point with more or less bleeding. Between these two points there may be also traced a track of bruised brain tissue with minute punctiform hæmorrhages and molecular injury.

On the other hand injuries to the brain produced by momentary impact of an injuring agent of small area is much less likely to start such a wave, and consequently the injuries produced by sudden, violent blows are usually limited to laceration of the brain substance immediately beneath the part of the skull struck. Thus non-penetrating or glancing bullet wounds are said to produce the most typical localized cortical lesions. The case just cited is evidently one of localized injury, though we do not know exactly what the nature of the fracturing force was—probably the cork of a horse's shoe.

In regard to prognosis it must not be forgotten that in injury of this kind there occurs during the process of repair a soldering of the various membranes together. The dura also becomes densely adherent to the skull, and thus there is an anchoring of the brain at that part which in later years may be productive of headache, epileptiform convulsions or attacks of giddiness on sudden movement.

Dr. Peters presented a second patient upon whom he had performed a plastic operation to relieve cicatricial fixation of the thumb inflexion. The following was the history of the case:—

The thumb in this case was bound down by a very dense and deep cicatrix resulting from a deep suppurating wound in the thenar

eminence. The short flexor muscles seemed to have sloughed away and the skin was firmly bound down to the metacarpal bone and the annular ligament. The thumb was drawn inwards so that it lay across the middle of the palm, its tip pointing towards the little finger.

In the operation the cicatrix was divided freely; also the outer part of the contracted annular ligament. The anterior and lateral ligaments of the metacarpo-phalangeal joint were also divided, as well as the remains of the short muscles of the thumb. The long flexor tendon was left undivided but was dissected out of the cicatrix so that it moved freely.

The wound thus made on the palmar aspect of the thumb was filled in by dissecting up a flap from the dorsum. This flap was one and a-half inches long by three-quarters of an inch wide, and its base was adjacent to the wound in the palm. Care was taken to maintain a good thickness to this flap so as to insure its vitality. Having been very freely dissected up, the flap was swung from the back to the front of the thumb and stitched into place by horsehair sutures.

The wound on the back was closed in the same way after very freely undermining its edges in all directions.

The wound was not dressed for six days and was found to have healed throughout by first intention.

#### FRACTURE OF THE MAXILLÆ.

Dr. George A. Bingham showed a boy under his care who had suffered from compound fracture of the superior and inferior maxillæ, the base of the skull, with extensive injury of the soft parts.

In a brief description of the case Dr. Bingham said:—I present this case more as a curiosity than anything else. Sometime in December this boy was riding a bicycle at a rapid rate along the devil strip with his head down. He came in contact with a butcher cart which was being driven at a rapid rate from the opposite direction; the shaft struck him in the face, crushing his nose and his eye out of sight, passing through the orbit, fracturing the superior maxillæ, fracturing the inferior maxillæ, fracturing the base of the skull, and carrying away a portion of the facial nerve. Dr. R. J. Wilson was called and at his request I operated on the patient the night of the injury. We first built up a nose, then brought the eye into position, adjusted the orbit and the fractured superior maxillæ and hard palate, stitching the soft parts over the hard palate, put the jaw in a splint, and got him in a fair condition. He was vomiting



blood freely. Those who saw him thought there was no hope for him, but the subsequent history shows that it is hard to kill a boy.

Occasionally now a small portion of bone comes from the right ear. Owing to the damage done to the facial nerve on the right side, the function of the muscles on that side is gone and gives the face the appearance it has. The vision of the injured eye now is very good.

Dr. Bingham presented a second patient with the following history: The patient, a little girl, on January 23rd, 1896, fell, while playing, and scratched the skin over the right patella. On the same day she got her feet wet. The wound was not attended to. Five days after Dr. Powell was called in; he noted a flushed area below the patella on the upper end of the tibia, which was very tender. He considered the case one of osteomyelitis, and sent her to the hospital under the care of the speaker. On the 29th he (Dr. Bingham) trephined into the epiphysis of the tibia and found a pus cavity which he scraped out. Healing took place readily. Three days after the patient began to complain of pain in the lower epiphysis of the right humerus. Incision was made and drainage, healing following. The next point attacked was the upper epiphysis of the same bone. Similar operation was done. The next bone attacked was the right tibia at its lower end. Since that time until now (about two years) the patient has returned periodically to the hospital for treatment, undergone operation on some bone and recovered. On one occasion a considerable portion of the right clavicle was removed; at another time the scapula on one side. Few of the long bones had escaped. A considerable portion of ribs had been removed. The speaker thought that the disease would be sure to reappear. The patient had been put on tonic treatment, and she had the best hygienic care. The last bone affected was one of the ribs on the left side. The wound of this operation was not yet quite healed.

Dr. A. H. Garratt then reported a case, the salient points of which are as follows:

OPERATION FOR PENETRATING PISTOL WOUNDS OF THE ABDOMEN  
WITH PERFORATION OF THE STOMACH.

On January 10, 1898, at 6 p.m., I was called to York street to see a case of pistol shot wounds of the abdomen in a woman thirty years of age. Upon my arrival I found that a quarter of an hour before the patient had been shot in two places with a thirty-two calibre revolver. The pistol had been discharged first from a dis-

tance of one foot, and the bullet had struck one inch to the right of the median line and three inches above Poupart's ligament. This bullet followed a subcutaneous course, and was afterward removed near the inferior iliac spine five and a half inches from the point of entrance. The second bullet struck two inches to the right of the median line and three inches above the umbilicus, and had been discharged from a distance of nine feet.

The patient complained of little pain, but was very much excited, having climbed an eight-foot fence, wrested the pistol from her husband and would-be murderer and shot a strange man in the thigh who tried to stop her on the street. I made a hurried examination, demonstrating with a probe that one bullet did not produce both wounds, and had the patient sent to St. Michael's Hospital under my care.

I visited my patient again at 8 p.m. and found her lying on her back with knees drawn up and suffering great pain all over the abdomen, although the house surgeon had given an eighth of a grain of morphine before my arrival. The pulse was 110 and the temperature 100°. The abdomen was markedly distended and the face anxious. I decided on laparotomy at once, and ordered one-quarter of a grain more of morphine while the preparations were being made. It was more than an hour before the patient was prepared and my assistants ready. Dr. J. N. E. Brown administered ether, and during the first stage of anæsthesia the patient vomited a pint of blood clots and food. I made my incision four inches in length in the median line above the umbilicus and over the track made by the second bullet through which the probe had passed.

On opening the peritoneum there was a sudden escape of gas leading Dr. Bingham, who assisted me, to suspect that my knife had wounded a knuckle of intestine. On careful search this was disproven.

The transverse colon was pushed down and the stomach brought up in the wound, and after a short search a perforation of its anterior wall was found; this I closed with nine Lembert sutures of fine silk and continued the search for a wound of exit. After going carefully over the stomach and neighboring organs and finding no other wound, the peritoneum in easy reach was cleansed with sponges wrung out of hot sterilized water and the abdominal wound closed with deep silk worm gut sutures including all the tissues. A strip of iodoform gauze was passed down the bullet track and brought out between the sutures. Iodoform was dusted over line of wound, and iodoform gauze, sterilized gauze and cotton wool completed the dressing which was held in place with a cotton binder.

The first bullet near the iliac spine was now removed through a small incision and its track lightly packed with a narrow strip of iodoform gauze. I then ordered a search to be made in the vomited matter for the second bullet, but unfortunately it could not be found, and I am still in doubt as to its whereabouts.

Patient recovered from anæsthetic nicely but complained of a little pain all over abdomen.

The next day, Jan. 11th, was given nothing but hot water in drachm doses per mouth; had several attacks of vomiting.

On the following day, Jan. 12th, was given an ounce of beef tea per mouth and the mouth was frequently washed out with ice water; feeding by nutrient enemata was commenced, and there was no more vomiting. Patient still complained of tenderness over the abdomen.

The dressing was changed and shorter pieces of gauze inserted in bullet tracks.

From the 12th until the 16th patient was fed on nutrient enemata and steadily improved.

On the 16th feeding by the mouth was commenced and continued without ill effect.

On the 31st the stitches were removed and the wound was perfectly healed, the bullet tracks were also healed. Patient was allowed to sit up on Feb. 6th, and was placed on the regular hospital diet. This operation was not undertaken until symptoms indicating perforation of stomach or intestine showed themselves, thereby disproving the assertion of Dr. Parke of Scranton, Pa., in the *New York Medical Journal* of Jan. 15th, that at such time the operation was always too late.

Dr. George Peters said he was not certain whether or not one should not in these cases, when the history showed pretty clearly that the bullet was fired at close range, explore the wounds at once without waiting for symptoms. If the bullet were fired in a fairly direct way it would be almost sure to go through the abdominal wall. The risk of an exploratory incision was not great.

Dr. King pointed out that it was fortunate that the bullet had entered over the stomach instead of lower down, for the contents of that viscus had, no doubt, contributed to the stoppage of the course of the bullet. He agreed that in these cases operation should not be delayed.

Dr. Temple made some remarks on a case of carcinoma uteri. The patient was a woman who had entered the pavilion at the

General Hospital under his care. Her age was only twenty-eight, and she was the mother of four children. She was greatly emaciated. On examination he recognized a cancer of the body of the uterus, and the disease so far advanced that he could not offer the slightest hope by operation. The disease had involved the ureters and had caused hydro-nephrosis.

Dr. Harold Parsons read the post-mortem report made by Dr. H. B. Anderson, as follows :

Mrs. M. Aged twenty-eight. General emaciation. Subcutaneous fat scanty. Fundus uteri three inches above the symphysis pubis. The thoracic and abdominal viscera were all examined but presented nothing special of note except as follows : Right ureter was three-quarter inches in diameter, being immensely distended with fluid. Right kidney was very pale in color. Weight six and a quarter ounces, and showed marked hydro-nephrosis. The opening of the ureter into the bladder was involved in the cancerous growth. Left ureter slightly enlarged. Left kidney pale and showed a lesser degree of hydro-nephrosis. Weight four ounces. The ulcerating cancerous mass involved the whole body of the uterus. The cervix was entirely destroyed. The growth involves the whole of the bladder, ulcerating through in the median line, producing a utero-vesicle fistula. The orifice of both ureters was involved in the growth. Below it extends into the upper part of the vagina, and behind into the adjacent parts of the rectum. (Bladder was cut through from in front).

Microscopic sections of the growth show the structure of a glandular cancer, adeno-carcinoma. The cancer evidently originated from the glandular epithelium, but whether those of the cervix or body of the uterus the microscopic examination would not determine.

Dr. Peters presented two astragali he had removed from a case of double club-foot upon which he had operated. He described the various incisions recommended for the operation.

Dr. G. S. Ryerson and Dr. B. Spencer were appointed a committee to act with committees from other societies in the consideration of the proposed academy of medicine.

The society then adjourned.

## THE PATHOLOGICAL SOCIETY OF TORONTO.

THE regular meeting of the Pathological Society was held on February 26th, in the Biological Building, Dr. H. B. Anderson in the chair. Those present were: Drs. J. E. Graham, McPhedran, Bingham, Greig, Wm. Oldright, Wilson, Hamilton, Bruce, Silverthorne, Carveth, J. N. E. Brown, F. N. G. Starr, Peplar, Rudolf, Parsons.

The minutes of the previous meeting were taken as read and adopted.

Dr. G. Silverthorne read a paper on "Diseases of the Coronary Artery, and its effects," which will appear in next issue.

Dr. Bingham read a paper on

## CANCER (?) OF ANTERIOR PILLAR OF FAUCES.

Mr. T., æt. 58, first noticed small growth on the anterior pillar of fauces in July, '97. This broke down some months later, and I saw him in November, '97, when there was an ulcerated surface the size of a ten cent piece. Potassium iodide was given until iodism was produced with no result as far as the ulcer was concerned. The ulceration, as you see, has extended to the palate and the tissues behind the faucial pillar. The submaxillary glands are enlarged and indurated. The patient complained of much pain at first, but of late this has almost entirely disappeared.

The patient has been a heavy smoker. Family and personal history as to disease is excellent.

Dr. H. B. Anderson, discussing Dr. Bingham's paper, said: "Microscopic examination of a piece of tissue from the anterior pillar of the fauces showed a great many vessels distended with blood and infiltration with polymorphonuclear leucocytes. There is some evidence of epithelial overgrowth, the cells also being altered in shape, but this might be secondary to the inflammatory condition present. Epithelioma of the anterior pillar of the fauces is very rare except when involved by extension from adjacent structures. The apparent improvement and the manner in which the trouble first showed itself in separate patches on the hard and soft palate and anterior pillar did not suggest malignancy."

Dr. Silverthorne, discussing Dr. Bingham's case: "It would appear that the growth could be inflammatory in origin from irritation of teeth. The fact of change in point of greatest intensity would be against epithelioma.

Dr. Wm. Oldright said: If one may speak as to the pathology of this case through a clinical expression of opinion, I would say that I would feel inclined to have that tooth removed and give large doses

of potassium iodide alternated with mercuric bichloride, before resorting to more heroic measures.

Dr. McPnedran : Potassium iodide must be given in very large doses. Iodism may be produced by a small dose and cease if a larger dose be given.

Operation even now would have to be very extensive.

Dr. Bruce advised early operation. Potassium iodide had had a chance.

Dr. Graham spoke of the work of Gilchrist with blastomyces in skin diseases. Could there be anything of the kind here?

Dr. Parsons referred to a recent abstract in *The British Medical Journal* regarding blastomyces in enlarged tonsils. In the case presented, the history of a primary swelling and pain so great in character was more that of an inflammatory condition than a new growth. He asked if there were a sinus leading to bone, such as found in necrosis.

Dr. Bingham, replying, said he thought the disease, if carcinomatous was very widespread and operation would be very extensive.

Dr. Graham, discussing Dr. Silverthorne's paper, thought thrombosis of the coronary arteries a subject of great interest. He referred to an instance in his practice, a case of septic endocarditis (*Streptococcus*). Patient while at stool was seized with dyspnoea and precordial distress. This occurred on a Saturday. Morphia relieved the distress and he slept well. Woke on Sunday morning in great pain, died on Monday. Post-mortem, a septic embolus was found in one coronary artery.

Dr. Graham asked as to the character of atheroma and its relation to arterio sclerosis. Extreme coronary arterio sclerosis in cases of death from other causes, was also spoken of. Also of the slowness of death in some cases of rupture of the heart. In wounds of the heart death may be slow.

Dr. Carveth referred to a case he presented two years ago to the society, in which sudden death took place, and on examination of the heart the coronary arteries were found to be almost obliterated, especially in their lower parts.

Dr. Greig referred to a case that he had reported at a previous meeting of this society, in which sudden death had occurred in a young woman aged twenty-eight years, and in which the post mortem discovered no possible cause of death, excepting a marked atheroma of both coronary arteries. He asked the question, why should this young woman die suddenly? The heart was small, with thin walls, evidently badly nourished. He referred to a suggestion made by

Welch at a meeting of this society some years ago of the possible existence of peculiarly sensitive areas in the heart wall, and so long as this area was nourished life would exist, and when it was deprived of its nutrition death ensued suddenly. He reasoned by analogy from the sensitive spots in the heart of the dog.

Dr. Greig also referred to the existence of an anatomical anastomosis between the coronary arteries as proved years ago by the experiments of Wickham Legg and S. West in London. Porter in a recent paper says that while this is true, yet for purposes of the circulation it need not be considered, because the heart beat is not sufficient to force the blood through the anastomosing vessels. Another question broached by the speaker was the fact of sudden death occurring sometimes when only one coronary artery was blocked and in other cases not. Dr. Greig suggested the possibility of the anastomosis being freer in some individuals than in others, and thus an explanation of the above question.

Moved by Dr. Peplar, seconded by Dr. Oldright, that Dr. Oldright's paper be postponed to a subsequent meeting. Carried.

The other specimens were then presented.

#### CIRRHOSIS VENTRICULI.

Dr. Hamilton: These sections are from a specimen presented by Dr. Graham at the December meeting. It will be remembered that the stomach was very small, its cavity holding only about six ounces. The walls were very much thickened and very firm in consistence.

The sections present the following appearances:

The superficial epithelium of the mucosa has disappeared in places. The glandular structure has lost its regular arrangement. The tubules show an atypical ramification. The glands in some places have disappeared altogether. In others some dilated cystic forms are left. There is an abundant small celled infiltration in the interglandular spaces and formation of fibrous tissue, which in places has entirely taken the place of the gland structure and in others can be seen as a network around the tubules which remain. The submucosa and muscular coats present the same infiltration and fibrous tissue formation. There is also the same condition very marked in the serous coat.

Dr. Graham: The literature of this condition is very scarce, not mentioned at all by many. Dr. Welch doubts its existence. Klebs and Fagge briefly refer to it.

Dr. Rudolf in discussion said the stomach in this case may have been a small one, or at least have been small for many years.

The patient reached the age of 72 years in comparative health. Dr. Carl Schlatter of Zurich lately excised completely a stomach of a patient who had cancer of stomach. He joined the œsophagus to the jejunum ten inches beyond the duodenum. She was able to eat all kinds of food and put on two pounds a week. This shows that the stomach is not necessary to perfect digestion and Dr. Graham's case supported this view. Dogs have lived for years without stomachs.

Dr. F. N. G. Starr showed an epithelioma of the auricle he had removed from the ear of a man aged 58. He also presented a photograph of the growth before removal.

Until this case had come under his observation he had never seen a case, but within a week after this case he assisted Mr. Cameron to remove one from the base of the lobule of the ear of a man aged 82, and had been consulted by a third in an old man aged 84 years, at the outdoor department of the General Hospital. This one appeared to spring from the floor of the concha, and was a large fungating mass. He regretted having been unable to secure either the specimen or a photograph.

The condition, though not an unknown one, is certainly not a common one, and it seemed odd that all his experience of the disease to date should be limited to a week.

---

### LONDON MEDICAL ASSOCIATION.

---

THE regular meeting of the London Medical Association was held at the Medical College on Monday evening, Jan. 10th, 1898. Present—Dr. F. R. Eccles, president, in the chair, and Drs. Moorehouse, McArthur, Graham, Weekes, Hodge, Wishart, H. A. and W. J. Stevenson, Hotson, Roome, Meek, Bayly, Owens, Thomson, Macdonald and English, and several students.

The president, Dr. Eccles, thanked the members for electing him to the president's chair for the ensuing year, and after a few terse remarks, proceeded with the regular business.

Minutes of previous meeting read and approved.

On motion of Drs. Roome and Hodge, Dr. N. R. Henderson was elected a member.

Dr. H. A. Stevenson exhibited the following interesting specimens:—

1. Hernial Sac with concretion in the bottom thereof.
2. Section of necrosed bone removed from femur.
3. A mulberry calculus weighing four ounces. Fifteen years



previously patient had an attack of renal colic and had no further symptoms until two days before operation.

4. Microscopical sections of several diseased vermiform appendices.

#### HEPATIC CALCULI.

Dr. English exhibited specimens of hepatic calculi removed by Dr. Eccles, and gave a brief history of the case.

#### APPENDICITIS.

Dr. Eccles showed specimens of two cases of appendicitis recently operated upon.

As a continuation of the discussion of the previous meeting on appendicitis, Dr. Hodge read an interesting paper on its medical treatment. After briefly describing the symptoms of an ordinary mild attack, he said he would in those cases give a mild saline aperient or enema, then morphia hypodermically or opium by mouth in amounts quite sufficient to relieve pain; also intestinal antiseptics such as salol and bismuth with one-tenth grain dose of calomel, low diet and if vomiting, use the stomach tube.

During the discussion which followed, Dr. Moorehouse did not favor purgative treatment, but gave opium in large doses "to keep the bowels in splints." Had seen ill results from saline given by mouth or rectum. Dr. Meek did not agree with the statement of some authorities who say that appendices are more liable to become inflamed when the opening into the bowel is large. His line of treatment was immediate laxatives, as there is much more danger of infection if the bowel be loaded than otherwise. Give morphine with care.

Dr. McArthur used saline or calomel, but no opiates, and consulted a surgeon early. Dr. Eccles did not approve of the passage of a stomach tube. Drs. Roome, Graham, H. A. and W. J. Stevenson took part in the discussion and Drs. Wishart and Hodge replied.

All the surgeons present were agreed that cases that were suitable for operation should be diagnosed as such if possible by the thirty-sixth hour, as the death rate could be so much decreased in these cases by early operation.

The medical men were not united as what treatment should be carried out in medical cases.

The meeting adjourned at 10.25 p.m.

The next regular meeting of the Association was held on the evening of Feb. 14th. Dr. F. R. Eccles, president, occupied the

chair, and there were present Drs. Hodge, Meek, Wishart, Ferguson, W. J. Stevenson, Thomson, English, McArthur, Moorehouse and several students.

#### CIRRHOSIS VENTRICULI.

After reading and approval of minutes, Dr. W. J. Stevenson exhibited the stomach of a female aged 75, who had been affected with cirrhosis ventriculi, and gave full notes of the case. Had a history of vomiting for a year with no pain nor rise of temperature. Had subsisted entirely on koumiss taken in minute quantities, any other foods being ejected immediately on injection. A tumor was felt to be freely movable and corresponding to the position of the greater curvature of the stomach, and the case was diagnosed as one of malignant disease of the stomach. Post-mortem revealed the fact that the tumor felt was the entire stomach much contracted and only large enough to contain one ounce of fluid.

#### FIBRO MYOMA.

Dr. Stevenson also showed a fibro-myoma of the uterus involving the posterior wall, that had been removed per vaginam, a fibroid in the uterine wall which had undergone degeneration, and an ovarian cyst.

#### RENAL CALCULUS.

Dr. Jas. McArthur gave report of a case of renal calculus. The patient, aged 12 years, at 5 years of age suffered from hæmaturia and for the past three years had frequent recurrences.

On Jan. 6th, 1898, nephro-lithotomy was performed by Dr. Wishart and the exhibited specimen removed from the pelvis of the kidney. The patient recovered from the chloroform but died in twelve hours.

The papers were fully discussed by Drs. Wishart, Moorehouse, Meek, Ferguson, Henderson and the president.

Moved by Drs. Ferguson and McArthur that Drs. Hodge, English and Moore be a committee appointed to wait upon the City Council at its next meeting to renew the application of this association for an initial grant of \$500 for the establishment of a city bacteriological department in connection with the local board of health. Carried.

## Book Reviews.

---

A TEXT-BOOK OF THE DISEASES OF WOMEN. By Henry J. Garrigues, A.M., M.D., Professor of Gynæcology in the New York School of Clinical Medicine; Gynæcologist to St. Mark's Hospital in New York City, etc. Octavo, pp. 728. Containing 335 engravings and colored plates. Second edition, thoroughly revised. Philadelphia: W. B. Saunders, 925 Walnut street. 1897.

The first edition of Dr. Garrigues' admirable text-book of the diseases of women was very well received by the profession of the United States and Canada. The author's style of writing is clear and concise, and his large experience as a practitioner and teacher enables him to choose the most important points connected with each subject he treats, and present them to his readers in a lucid manner. In the second edition he has devoted a great deal of attention to aseptic surgery, in connection with the various operations which he describes. He has omitted certain parts of the former text and some of the illustrations, and at the same time has added much that is new, especially in connection with the surgical treatment of uterine fibroids and cancer, vaginal sections, and intestinal surgery. We have no hesitation in saying that it is in every way a good and safe book for both students and general practitioners.

---

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY: Being a yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. Collected and arranged with critical editorial comments by eminent American specialists and teachers, under the general editorial charge of George M. Gould, M.D. One volume of nearly 1,200 pages, profusely illustrated with numerous wood-cuts in text, and thirty-three handsome half-tone and colored plates. Price: Cloth, \$6.50 net; half morocco, \$7.50 net. Philadelphia: W. B. Saunders, 925 Walnut street.

We have nothing but the highest praise for this admirable and invaluable summary of the progress made in medicine during the year 1897. In commenting on the volume issued last year *The Lancet* (English) spoke as follows: "It is difficult to know which to admire most—the research and industry of the distinguished band of experts whom Dr. Gould has enlisted in the service of the Year-Book, or the wealth and

abundance of the contributions to every department of science that have been deemed worthy of analysis. . . . It is much more than a mere compilation of abstracts; for, as each section is entrusted to experienced and able contributors, the reader has the advantage of certain critical commentaries and expositions. . . . It is emphatically a book which should find a place in every medical library, and is in several respects more useful than the famous 'Jahrbucher' of Germany." We quite agree with *The Lancet's* estimate of this volume; and are pleased to add that the book for '97 is quite equal, if not superior, to its predecessor in all respects, while, at the same time, it contains seventy-five more papers.

**A TEXT-BOOK OF DISEASES OF WOMEN.** By Charles B. Penrose, M.D., Ph.D., Professor of Gynæcology in the University of Pennsylvania; Surgeon to the Gynæcian Hospital, Philadelphia. W. B. Saunders, 925 Walnut street, Philadelphia, 1897. Price, \$3.50 net.

This is a good, practical text-book, written in a clear, plain style, well printed, and well illustrated. It is intended especially for students and will be found very suitable for their wants. At the same time, we think it will be highly appreciated by general practitioners. The author in most instances has recommended only one plan of treatment for each disease, hoping in this way to avoid causing confusion in the minds of students or physicians who consult the book. He has also, as a rule, omitted details in connection with anatomy, physiology, and pathology.

In the first chapter he discusses the general causes of diseases of women, and then goes on to describe very clearly and fully the methods of examination. After describing diseases of the external genitals and their treatment, he devotes several chapters to the perinæum, its injuries and results of such injuries. He then takes up displacements and disorders of the uterus, fallopian tubes (including tubal pregnancy), urethra, and bladder. In the closing chapters he describes the technique of gynæcological operations, and the after treatment of coeliotomy.

**DISEASES OF THE EYE.** By Edward Nettleship, F.R.C.S., Ophthalmic Surgeon at St. Thomas' Hospital, London; Surgeon to the Royal London (Moorfield) Ophthalmic Hospital. Revised and edited by W. T. Holmes Spicer, M.A., M.B., F.R.C.S., Ophthalmic Surgeon to the Metropolitan Hospital and to the Victoria Hospital for Children. Fifth American from the sixth English edition. With a supplement on "Color Blindness," by William Thomson, M.D., Emeritus Professor of Ophthalmology in the Jefferson Medical College of Philadelphia. Handsome 12mo. of 521 pages, with 2 colored plates and 161 engravings. Cloth, \$2.25. Lea Bros. & Co., Publishers, Philadelphia and New York. 1897.

The present edition is in every way up to date. It is a new and wise departure to bring more fully into notice than usual American ophthalmic ideas, and thus to make the work more suited to the wants of the English-speaking world. It has all the thoroughness and correctness of detail and description which any work Mr. Nettleship is connected with is sure to have.

The portion devoted to the eyelids and lachrymal passages is succinct, but at the same time full of information and easily to be understood. The use of styles is even more to be advised than herein stated, as it leads to less probing, which is a boon to the sufferers. With respect to the conjunctiva a little more minuteness of detail regarding treatment might be usefully given. In gonorrhœal ophthalmia the lotion of carbolic acid, 1 in 20, is not mentioned, a remedy which some consider one of the most valuable and easily applied. As to the cornea, the description of the affections, the plates and the treatment leave nothing to be desired. The papers on iritis, cyclitis, hyalitis, etc., are good; but there is slight or no mention made of the use of hypodermic injections of pilocarpine with or without mercury and the iodide of potash, which has proved most beneficial in syphilitic diseases of the eye where other remedies have failed.

Regarding cataract, an exceedingly well-arranged and clear description is given of the lens and its diseases. The diseases of the deeper structures of the eye are clearly and fully described, and at the same time there are given many expressive illustrative plates. Well executed illustrations are a great aid to the reader, and the number in this edition is to be commended.

In the section devoted to operations their free use is of great value. The supplement, in regard to color and visual tests, and the appendix of formulæ are well and clearly arranged so as to be easily grasped. The type and paper are excellent.

---

TRANSACTIONS OF THE AMERICAN PEDIATRIC SOCIETY. Eighth Session, held in Montreal in May, 1896. Edited by Floyd M. Crandall, M.D., and reprinted from the Archives of Pediatrics. A. G. Sherwood & Co., 47 Lafayette Place, New York.

It is always with a feeling of interest that a reader opens a volume of Society Proceedings. In it we expect to find questions of vital interest to our profession dealt with in a masterly manner, and to have light thrown on obscure topics.

The present report is late in appearing, but to any one who is not able to follow closely the development of Pediatrics it will be a valuable acquisition. The front of the book is brightened by a photo-gravure of the president, Dr. James O'Dwyer, of New York city. Then comes the presidential address, "The Evolution of Intubation." The writer describes in detail the different instruments prepared by him, thirteen tubes in all, the changes made as each successive one was found defective, until finally the present set was produced.

It was very truly a process of evolution, and, as the author points out, shows the wonderful results which can follow systematic thinking. The experiments began in 1880, and it was not till 1886 that the final set was perfected, and they have been so perfect that no modification of any kind has been made in them.

A cut is given of the thirteen different tubes tried, with the four extractors.

This volume contains the now well known "Report of the Societies' Collective Investigation Committee on the use of Antitoxin."

This is followed by a number of papers on diphtheria, one of which is of particular interest, viz., "Cause of Sudden Death after Antitoxin Injections." The authors, Seibert and Schwyzer, undertook experiments along three lines :

1st. They injected large doses of fresh and old antitoxin.

2nd. They injected large doses of carbolic acid in the strength used to preserve the serum (Behring's serum is supposed to contain  $\frac{1}{2}$  per cent. of carbolic acid).

3rd. They injected two c.c. of air.

In each case the injections were made into the internal jugular vein. The air injections were the only ones that proved fatal, and the authors concluded accordingly. To me it appears inconceivable that any physician could inject air in such large quantities while using antitoxin.

Then follows three articles on Lumbar Puncture in Meningitis, one on Pasteurization of Milk, and twenty-five more dealing with different subjects in a clinical manner, some of them being reports of cases. All of these articles are by well known writers, such as : Holt, Seibert, Northrup, Chapin of New York, Osler of Baltimore, Lafleur & Blackadar of Montreal, Rotch & Townsend of Boston, and many others.

A SYSTEM OF PRACTICAL MEDICINE. By American authors. Edited by Alfred Lee Loomis, M.D., late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M.D., Professor of Medicine in the New York University. To be completed in four imperial octavo volumes, containing from 900 to 1,000 pages each, fully illustrated in colors and in black. Volume III.—Diseases of the alimentary canal, peritoneum, liver, and gall bladder, spleen, pancreas and thyroid gland, chronic metal poisoning, alcoholism, morphinism, infectious diseases common to man and animals, miscellaneous subjects. For sale by subscription. Per volume, cloth, \$5; leather, \$6; half morocco, \$7. Lea Brothers & Co., Publishers, Philadelphia and New York. 1898.

The third volume of this splendid work sustains the high degree of excellence of its predecessors. It is of special interest to Torontonians in that one of the most important articles is from the pen of J. E. Graham, the Professor of Medicine in the University of Toronto.

The first article in the volume—that on diseases of mouth, tongue, tonsils, pharynx, and salivary glands—written by Cabot, of Boston, is terse and practical. Chlorate of potash, which is used so indiscriminately in diseases of the mouth and throat, is recommended in ulcerative stomatitis only, where it is said to be a wonderfully effective though somewhat dangerous remedy. He emphasizes a fact too often neglected, namely, that in the pseudo-membranous form of follicular tonsillitis,

when a widespread membrane is present, bacteriological examination alone can decide whether it is or is not diphtheritic. Acute follicular tonsillitis is, he says, self-limited, and cannot be aborted or much shortened, but phenacetin allays the fever, pain and soreness; there is no better gargle, he says, than hot milk. In the removal of hypertrophied tonsils in adults, on account of the danger of hæmorrhage, he recommends the cold wire polypus snare instead of tonsilotome.

Allen Jones, of Buffalo, contributes an article on diseases of the œsophagus. Stockton, of Buffalo, has devoted a good deal of attention to diseases of the stomach, and his article (written in collaboration with Allen Jones) is an able presentation of a subject in which marked advances have been made in the last few years.

The articles on diseases of the intestines are written in part by W. W. Johnston and in part by Henry M. Lyman, of Chicago.

McNutt, of San Francisco, contributes a good article upon appendicitis. He makes a timely protest against abdominal operations being undertaken by those who have neither experience nor training in such work. He thinks it absurd to contend that every case diagnosed as appendicitis should be operated upon within the first twenty-four hours, condemns opiates, and advises laxatives—calomel or castor oil by preference—and advises operation only when serious doubt arises as to the necessity therefor.

Dock, of Ann Arbor, writes the article on intestinal parasites; and Vaughan, of the same place, the very useful paper on food poisoning.

H. A. Hare's article on diseases of the peritoneum is one of the best in the volume. An interesting observation is that hysterical peritonitis may simulate acute peritonitis very closely, every symptom being present, even fever and apparent collapse. In the treatment of acute diffuse peritonitis he is an advocate of the opium treatment when operation is not deemed advisable. But he strongly advocates that the surgeon should always be called in consultation and that most of the cases should be operated on.

No article in the volume reflects greater credit upon the writer than that of J. E. Graham upon diseases of the liver and gall bladder. It shows an intimate acquaintance with the literature of the subject as well as a thorough practical knowledge of the various disorders of these important organs.

George Roe Lockwood, of New York, contributes the article on diseases of the spleen, and Stockton, of Buffalo, that on diseases of the pancreas. The article on goitre and exophthalmic goitre by Kinnicutt, and on cretinism and myspædena, by M. Allen Starr, are of special interest and could scarcely be improved upon.

Next comes two able articles from the pens of Montreal writers, viz.: Chronic metal poisoning, by Frederick Finley, and alcoholism and morphinism, by James Stewart.

The infectious diseases common to man and animals, viz.: Glanders, anthrax, rabies and actinomycosis are discussed in an able and interesting manner by James Law, the professor of veterinary surgery in Cornell University.

W. B. James next contributes short articles on hæmophilia and filaria sanguinis hominis, and then comes a first-class article on diabetes and leycosuna, by Warren Coleman.

The last article in the volume is on insolation, and the author is Alexander Lambert, of New York.

The general excellence of the volume, as of its predecessors, is such as to commend it to the general practitioner. Advances have been made along so many lines during the past few years that if we do not read the new books we soon find ourselves away behind the times.

## Medical Items.

---

DR. F. T. BIBBY has removed from Port Hope to Brighton.

DR. G. R. McDONAGH has been enjoying a trip to Mexico.

DR. MORLEY CURREY has located on Carlton street, Toronto.

DR. SUTHERLAND (Tor. '97), who practised in Kaslo, B.C., last year, has gone to the Klondike.

DR. JAS. F. W. ROSS took a two weeks' trip in February, visiting New Orleans and other southern cities.

DR. THOMAS H. WHITELAW, of Guelph, intends, it is said, to move out to the west and practise in Edmonton.

MRS. ERNEST HART is collecting material for a "life" of her husband, which she intends to prepare for publication.

THE American Medico-Psychological Association will hold its fifty-fourth annual meeting at St. Louis, Mo., May 10-13, 1898.

DR. BEATTIE NESBITT, who recently spent some weeks at Johns Hopkins Hospital, has again gone to Baltimore for a couple of months.

THE Prince of Wales has been pleased to appoint Mr. Herbert W. Allingham, F.R.C.S. Eng., to be surgeon to His Royal Highness' household.

THE ONTARIO MEDICAL ASSOCIATION.—The next annual meeting of the Ontario Medical Association will be held in Toronto, June 1st and 2nd.

PROFESSOR HUERTHLE has been appointed to succeed Professor Heidenhain, whose assistant he formerly was, in the Chair of Physiology in the University of Breslau.

THE American Academy of Medicine will hold its twenty-third annual meeting at Denver, Colorado, on Saturday, June 4th, and Monday, June 6th, 1898, in the Brown Palace Hotel.

DR. J. MILTON COTTON, who practised in Lambton Mills for fifteen years, has removed to Toronto, and is now living at 218 Simcoe street, in the house formerly occupied by the late Dr. Strange.

GERMAN SURGICAL CONGRESS.—The twenty-seventh Congress of the German Surgical Society will be held this year in Berlin in the



Langenbeckhaus, from April 13th to the 16th, under the presidency of Professor F. Trendelenburg, of Leipzig.

THE National Confederation of State Medical Examining and Licensing Boards will hold its eighth annual meeting, Monday, June 6, 1898, at the Brown Palace Hotel, Denver, Colorado, at 10 o'clock a.m., under the presidency of Dr. Wm. Warren Potter, of Buffalo.

THE MEDICAL EXCURSION IN JUNE TO DENVER AND SALT LAKE CITY.—The American Medical Association meets at Denver, June 7th to 10th. One of the features of the gathering will be an excursion from Denver to Salt Lake City and return through the "heart of the Rockies."

PROPOSED TORONTO ACADEMY OF MEDICINE.—Efforts are being made to amalgamate the different medical societies of Toronto, viz.: Toronto Medical Society, Toronto Clinical Society, Toronto Pathological Society, and Toronto Medical Library Association, under the title of the Toronto Academy of Medicine.

---

#### OBITUARY.

Sir Richard Quain, Bart., Physician Extraordinary to her Majesty, President of the General Medical Council, and Editor of the Dictionary of Medicine, died March 13th, 1898, aged 82.

DR. THEOPHILUS PARVIN died at his residence in Philadelphia, January 29th, 1898, aged sixty-nine years. His death was attributed to cardiac asthma, complicated by uræmia and œdema of the lungs.

JOHN DICKSON KELLOCK, M.D.—Dr. J. D. Kellock, of Perth, died suddenly of heart disease, while engaged in attending to an urgent professional call, January 23, 1898, aged 63. He took his medical course in Kingston, and received the degree of M.D. in 1862. He at once settled in Perth, his native town, and continued in active practice there up to the time of his death.

CHARLES FREDERICK SNELGROVE, M.D.—Dr. C. F. Snelgrove, of Meaford, died February 22, 1898, in the 42nd year of his age. His death was the result of injuries received about a week before by the running away of his horse. He was educated in Trinity Medical College, and received M.D. from Trinity University in 1885.

HENRY DONALD FRASER, M.D.—Dr. H. D. Fraser, of Orangeville, died suddenly at his home, February 16, 1898, aged 38. He had been overworked for some time, and lay down to rest late in the afternoon. When one of the family went to call him for his evening meal she found him dead. Heart failure was said to be the cause of death.