

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.

CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

The Uses of Pus in the Animal Economy. By A. P. REID, M.D., L.R.C.S. Ed., &c., &c., Professor of Medicine and Clinical Medicine in Dalhousie College and University. Read before the Halifax Medical Society, Feb. 6th, 1872.

It is not my object in this paper to discuss the ordinary qualities of this animal fluid, nor how or why it may present itself, but rather to seek for evidence of its beneficial influence, qualities which are not much insisted on by Pathologists.

Received opinion makes it a specially noxious fluid, and the aim of the profession has been, and will be, to prevent its appearance if possible; and so far we are right, if our endeavours are to prevent the circumstances which give rise to it, and happily in no other way can we succeed in our attempts.

Its chemical composition is very nearly the same as that of the blood, and hence very closely allied to that of the tissues. The Pus globules we have every reason to believe, are the white blood corpuscles which, having passed through the capillaries, form part of the effusion into inflamed tissues, and at the focus of the inflammation being deprived of their nutrition, have lost their vitality, and must separated from the living parts.

The exuded fluids in the immediate vicinity of these globules, also lose their vitality from the same cause, and the two together form what we call *pus*.

Its formation explains to us one of the services it renders.

Use 1st—It is the method by which Dead Exudation Corpuscles and fluids assume a condition allowing of their subsequent removal by a channel which is not necessarily injurious to the system at large, whereas they would be if permitted to enter the blood, to be expelled by the emunctories. Few proofs will need to be adduced to sustain this position, for we are too well aware of the pernicious influence exerted by the entrance of decomposing matters into the circulation,

The collection is ordinarily expelled by what is termed an abscess, evacuated after its approach to the surface, either by nature or the bistoury.

But in some instances the abscess is not evacuated, being what is termed, absorbed or encapsulated.

Use 2nd—It is the method by which the before mentioned matters (so collected together when from favouring circumstances they cease to produce irritation in their vicinity) are absorbed or removed by the emunctories. The solid parts first having undergone a fatty transformation, owing to the influence exerted on them by the free circulation of blood in the walls of the abscess.

Use 3rd—It is the method by which dead exudation material finally becomes encapsulated. The abscess ceasing to produce inflammation in its vicinity, the free circulation of blood in the abscess wall exerts such changes in the composition of the fluid parts of the pus, as permit of their absorption without injury to the health of the solid part, which cannot be so dealt with becomes inspissated in the form of the innocuous substances. Fat, Phosphate of lime, Carbonate of lime and other salts, united by an indeterminate animal matter.

Or in other words, through the agency of *pus*, dead portions of the economy may become interred within the living system in some out of the way place, (where it would have been impossible to remove it to a greater distance) and then to give no more trouble than the little burying ground in the ploughed field, that was there established by the *Pioneer Settler* from necessity, many years ago.

So far our attention has been devoted to *pus* as a means of getting rid of a too profuse inflammatory exudation, but it has a far wider area of usefulness.

John Hunter long since demonstrated that *pus* is a solvent of dead animal substances—raw meat being easily dissolved in an abscess, or in *pus* kept warm out of the body—Hence,

Use 4th—It is the method by which tissues of all kinds, when deprived of their vitality, are reduced to a fluid capable of easy removal, as the contents of an abscess.

Use 5th—It is the method adopted by nature to assist vital absorption in amputating dead tissues, either externally or internally.

Use 6th—It is the method which assists Ulcerative Absorption, so termed in bringing an abscess to the surface. One portion or side of the abscess wall becoming gradually thinner as the abscess points.

I will give my explanations in the fewest possible words.

Take a case of simple phlegmon or carbuncle, at first a very small amount of pus escapes, and the *core* or dead cellular tissue has tensile strength by reason of the white and yellow fibrous tissue of which it is composed, and it adheres strongly to the yet living parts, requiring either the knife or caustic potassa for its immediate removal. Yet we know that in time, it will be all liquified and pass away as pus, be dissolved as perfectly as if by caustic potassa.

Again, in the case of a slough, ulcerative absorption so termed, divides the living from the dead, and at this point pus is formed, which exerting its solvent power dissolves the dead tissue up to the surface of the living—over which it has no influence.

I will not deny that this is a vital action, (the real process we do not yet understand,) but knowing the chemical properties of *pus*, it is fair to assume that when circulation and vitality cease at the line of demarcation, ordinary chemical changes may and do supervene; the pus bathing the living surface is in the best position to separate the dead from the living, because at this point the heat is greatest, and the higher the temperature, up to 100 ° F., the more active the solution. Hence, why it may be that the dead tissue is most dissolved in proportion to its nearness to the living surface.

Suppose a case of inflammation of the liver eventuating in an abscess two inches in diameter. As a result of the disease, the proper tissue of the liver, that occupied at least a portion of this space, dies surrounded by the dead exudation products or *pus*—which *pus* dissolves the tissue, (it being most favourably situated for solution,) and increases in amount as if by growth, rendering everything fluid up to the indurated wall in which circulation and vitality still go on.

It is not difficult to understand also in what way pus favours the gradual pointing of the abscess.

The wall nearest the surface gradually becomes thinner; and the pus as well increases in quantity, that is “ulcerative absorption” goes on, which means waste of tissue—and as well implies an increased amount of *pus*—or in other words, it is fair to assume that “ulcerative absorption” is due to diminished circulation in the part—the equivalent of diminished vitality, which is tantamount to increased death of the surface of the abscess wall at the part which is getting thinner, and the rapid removal by solution in the *pus* of the dead wall tissue, thus increasing the amount of *pus*, the abscess rapidly approaching the surface.

It may be said that dead animal tissue breaks down into pus,

but this is disproved by every day experience, for there is no resemblance between putrefaction (a gradual conversion into inorganic compounds, gaseous and saline) and conversion into pus, which is in every way distinct.

The pus may undergo a similar putrefaction, but this is a subsequent change.

In the inflammations of cold blooded animals and birds, no pus is formed, and the changes which occur are rather undecided.

If the Science of Medicine so far progresses, as to enable us to prevent inflammations of a type sufficiently severe to cause profuse exudations and death of tissue, we might have a condition approaching that of cold blooded animals, but until then, we must recognise the great service conferred on us by an agent that collects the dead products of inflammation, and favours their expulsion or harmless burial, that amputates and liquifies our sphacelated tissues in situations where they could not be touched by the surgeon, and that at the same time paves the way for their complete removal.

98, Argyle Street,

HALIFAX, February 7th, 1872.

London Practice. By JAMES PERRIGO, A.M., M.D., M.R.C.S. Eng.,
Demonstrator of Anatomy, University of Bishop's College.

No. II.

Charing Cross Hospital I visited very frequently, following the late Dr. Salter in the Medical side, or Mr. Hancock in the Surgical.

The operating day is Saturday.

Under Dr. Salter's care, I saw a case of Hydatids of the Liver in a female of about thirty. Dr. Murchison, of the Middlesex Hospital, was called in consultation. He strongly advised tapping. Mr. Hancock tapped the tumour with a small trochar, drawing off about two quarts of fluid. The next day, the patient complained of considerable tenderness, but that gradually subsided, and a good recovery was made.

Dr. Salter was an excellent clinical teacher, being most precise in everything. It will be very difficult to replace him. I was informed that he was on the eve of publishing a work on the heart and lungs. He had a most retentive memory, and would remember patients and the beds they occupied in the hospital, even if some considerable time had elapsed. His wards were always full of asthmatic cases, and the amount of pains he bestowed

upon them was astonishing. He gave the Iodide of Potassium largely, and had great faith in its efficacy. He thought highly of Belladonna when the dyspnœa was urgent. He was a great admirer of Niemeyer, and sometimes followed his treatment as regards the cold application at the outset of inflammation. I have seen several cases of inflammation of the mammae under his care, where he applied only cold iced dressings with benefit.

Dr. Salter held the opinion that pre-systolic murmur was of far more frequent occurrence than is generally allowed. He, like the rest of the London physicians, gave chloral hydrate in all cases demanding relief from pain. In painful dyspnœa from heart disease, he was accustomed to give it in pretty large doses. I have seen him treat several cases of hæmoptysis and hæmatemesis, where he very uniformly administered turpentine. He seemed to consider it a specific. In rheumatic fever, quinine in five grain doses, three times a day, was the remedy employed, and the majority of cases did not run a longer course than twelve days, and a great many not more than seven. Judging from the rheumatic cases that came under my observation, heart complications seem to be more frequent in England than here. I also noticed that those patients who lived close to the Thames, suffered more than those who came from some distance, and that they invariably required a more supporting treatment.

On Mr. Hancock's side, there was always a large number of cases of joint diseases to be seen. There hardly passed an operating day, without an excision.

The surgery in London is very conservative, and I have seen considerable risk run sometimes in endeavouring to push conservatism to an extreme.

In this hospital there are two wards devoted to children, and among the little patients, a good many cases of hip-joint disease are always to be seen. The treatment is much the same as here. Mr. Hancock excises the hip-joint early, but does not hesitate to operate even when the whole acetabulum is diseased, and some of the pelvic bones in addition.

Mr. Hancock was the first surgeon to perform the operation when there was much disease of the pelvic bones, but he shews that the muscles and fasciæ become so infiltrated with plastic matter and consequently thickened, that a pretty good barrier is formed to protect the pelvic cavity. I have seen him perform Pirogoff's operation on the foot, Chopart's and Syme's, but as a rule, in disease of the bones of the foot, he follows no rule, but saves all he can.

Mr. Hancock's name is associated with that of Kölliker, in

shewing that the urethra is surrounded through its entire length with an organic muscular coat.

Charing Cross Hospital is famous for the number of accidents it admits. I noticed that those of the lower classes (such is their habit of drinking,) who were brought in with broken legs, almost invariably had delirium tremens, two or three days afterwards. Bromide of Potassium and chloral hydrate formed the treatment then. One London physician, Dr. Wiltshire, strongly recommends half ounce doses of Tr. Digitalis, in traumatic cases.

Under Mr. Hird's care, I saw several bad cases of prolapsus uteri, where the operation for constricting the vaginal aperture was performed. He followed Baker Brown's method of removing a large portion of the mucous membrane, of the shape of a horse-shoe, from the lower portion of the vagina, and then bringing the opposite sides together by deep quilled sutures. These sutures were taken out the fourth day. The cases all did well.

Mr. Hancock had a peculiar treatment for old indolent ulcers that had no tendency to heal. It consisted in filling the ulcer with melted beeswax and bandaging, leaving it that way for four or five days and then renewing. By the kindness of Drs. Hingston and Coderre, I was allowed to try the method in two cases at the Hôtel-Dieu. It succeeded very well, although the cases were not very favourable ones. I may mention that I have seen Mr. Hancock operate three times for hernia, and in each case he opened the sac, and strongly advises it in all cases.

Charing Cross Hospital is situated in Agar Street, West Strand, and was established in 1818. The present building was erected in 1831, and last year an addition was built, giving thirty more beds. It has a school in connection with it, and the first year of its existence, there was only one student, and now there are sixty. Since the foundation of the hospital 350,000 patients have been relieved. Its annual expenses are not more than four thousand pounds.

When visiting the Middlesex Hospital, I went around with Dr. Murchison, and never have I seen teachers examine students as thoroughly at the bed-side. He was sure to pounce on any man who had not been following him regularly. Under his care, I saw a case of Locomotor Ataxia, where atrophy of the optic nerve ensued as early as six months after the commencement of the disease. The patient was taking preparations of silver.

I saw also several cases of diabetes treated by opium. I did not see any of the surgical practice of this institution.

Middlesex Hospital was founded in 1745, when it could only give accommodation for eighteen in-patients. It now receives an-

nually 21,000 cases, and its income is seven thousand pounds. It has one ward devoted altogether to cancer.

At King's College Hospital, I was fortunate in seeing Sir William Ferguson tie the subclavian artery twice. The first case died a few days afterwards, but the second recovered. The second was a case of traumatic aneurism of the axillary. The man had been wounded by a hay fork. During that same month (February, 1871,) the subclavian artery was tied four times in London. I also saw excisions of the knee performed by Ferguson, Wood and Smith. In all of them, the incision was oval. Engrafting was attempted in the healing of indolent ulcers. Some of the cases did very well, but a good many of them failed.

The expenses of this hospital are over £7,000 a year, and the new building which is now being enlarged cost upwards of £100,000.

At St. George's Hospital, I visited the orthopaedic department altogether, and followed Mr. Brodhurst. In treating hip-joint cases, he does not use Liston's splint at all, but employs instead a large gutta-percha splint well padded, which secures the whole pelvis. He extends the limb by the weight and pulleys, and counter-extension by means of bandages passed under the armpits, and attached to the head of the bed. He considers subcutaneous section of the adductor longus, gracilis and tensor vagina, as advised by Bauer, of no use whatever, and scouts the idea of its being antiphlogistic. Barwell, on the other hand, employs it, but only in the third stage.

I saw two cases where the chin was bound down to the sternum, caused by the contraction of cicatrices, the result of burns. He made several parallel incisions which relieved the deformity considerably. These incisions left large gaps into which he engrafted some portions of skin taken from the side of the neck. He covered them with lint and left them for several days. Healing went on rapidly from those centres, and in four or five weeks, they were quite well. The first of these cases is mentioned in his book on "Deformities," published last February. The second one I saw in March. Mr. Brodhurst is a great advocate of *brisement forcée*, and advises tenotomy beforehand, so that the influence of the muscles may be perfectly removed. He says that this operation of *brisement* is very frequently misunderstood, as some surgeons consider that it means forcible extension, and consequently the force is mis-applied, that instead of flexing the limb, it is extended. He says when this is done, it is apt to lead to mischief, but when the force is applied in flexing the limb, no danger can happen. He very kindly took me to see this opera-

tion in a private patient, a Polish gentleman, who had an ankylosed hip, the result of gonorrhœal rheumatism. In six weeks the patient was walking about with a cane. Passive motion, in this case, was commenced the third day after the operation.

The income of St. George's Hospital is about £10,000. Its museum contains a very valuable collection of specimens.

Before concluding this letter, I may state there is a Homœopathic Hospital, in Great Ormond Street, which was established in 1850, through the exertions of some English disciples of Hahnemann. Its annual income is about £3,000.

Hospital Reports.

SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL
GENERAL HOSPITAL, UNDER THE CARE OF G. E. FENWICK, M.D.

Case 11.—Penetrating Wound of the Chest. Reported by Mr. A. STEWART.

W. McL., æt 35, a stout Irishman, was admitted into the Montreal General Hospital, on Saturday, the 16th December, 1871, under the care of Dr. Fenwick, suffering from a penetrating wound of the chest.

He gives the following account of the manner in which he received the wound. On the Saturday evening above mentioned, while sitting in his own house he heard a rap at the door: on opening the door he was met by three persons, unknown to him, one of whom dealt him a blow on the chest with a knife. After receiving the wound he made prisoners of two of them, and kept them in his house until the police had arrived. He did not suffer any from shock, and there was very little hæmorrhage from the wound, and no hæmoptysis. On examination after his admission, the wound was found situated about an inch and a half below the middle of the left clavicle, about an inch and a quarter in length, and directed downwards and towards the right side. On examining the wound with the finger, the intercostal muscles were found to be wounded. There was extensive emphysema on the left side, extending from the clavicle to the lower margin of the ribs, and from the sternum back into the axillary space. There was great tenderness all over the emphysematous part, and severe pain and tenderness along the lower border of the pectoralis major muscle. On percussing the chest, both sides were found

equally resonant, and on auscultating, the vesicular murmur was also alike on both sides.

The wound was closed by metallic sutures and adhesive plaster. Patient was put to bed, and ordered half diet and a pint of beef tea. Pulse 80 per minute, and slightly irregular; respiration 22; temperature 99 4-5ths.

December 18th.—Feels quite comfortable, no tenderness over the emphysematous portion, considerable pain and tenderness along the lower border of the pectoralis major muscle. On taking a deep inspiration he complains of pain in the region of the wound; vesicular murmur heard over both lungs; has a slight tickling sensation at the base of the left lung. Pulse 57; resp. 20; temp. 98 4-5ths.

19th—Slept very little last night, does not feel quite so well to-day, complains of pain in the region of the wound during inspiration; emphysema has nearly disappeared, except in the axilla. Pulse 96; resp. 20; temp. 99.

20th—Feels considerably better to-day, not so much pain in the region of the wound, and no pain along the lower border of the pectoralis major muscle: emphysema gradually disappearing. Pulse 86; resp. 20; temp. 98.

21st—Still improving, slight pain in the region of the wound; sutures taken out, wound almost healed. Pulse 68; resp. 20.

22nd—Feels quite well, emphysema all gone, was allowed to sit up to-day. Pulse 70; resp. 20.

26th—Discharged from the hospital quite well.

Case 12—Skin Grafting in a Case of Ulcer of the Leg, of fifteen years duration. Reported by Mr. HENRY HETHERINGTON.

J. S., *æt* 53, was admitted into the Montreal General Hospital, on September 14th, 1871, under Dr. Wright, suffering with a large indolent ulcer which had existed for 16 years. It was of an oval form, and about 2½ inches in one direction by 2 in the other, and situated on the inner ankle.

Different methods of treatment were followed, without any success, until the 15th October, the patient having now come under the care of Dr. Fenwick, he decided on trying skin grafting.

October 15th—Two grafts were taken from the arm of the patient, and placed at about an inch apart in the ulcer, and covered with isinglass plaster, dressed with warm water and lint, the whole being lightly covered with a bandage.

18th—Examined and found both grafts adherent, presenting a bluish appearance round their margins.

20th—One of the grafts has disappeared, and the other, hardly as distinct as before.

23rd—Grafts again making their appearance in the form of new tissue, not having disappeared, merely having assumed the same appearance as the surrounding granulations.

30th—The grafts have progressed very favourably, new tissue being formed around their edges, and also the edges of the ulcer.

November 10th—Although the two former grafts did remarkably well, causing a large part of the ulcer to cicatrize, still quite an opening being left, Dr. Fenwick determined to apply two more grafts, which was accordingly done, and dressed in the usual manner.

11th—Grafts looking well to-day, having assumed that bluish white appearance, which they generally do at first.

12th—Evidently they are about to take; done up carefully with warm water dressings, and allowed to remain until

16th—When they were examined, and both found to be in sight and doing splendidly, having commenced throwing out their little bands of newly formed tissue, which are extending in all directions over the surface.

20th—Not looking so well to-day, begins to show unhealthy signs, a great deal of pus being thrown out; to be dressed with "red wash" daily.

23rd—Are now exhibiting more signs of life than when last examined. Cicatrization going on slowly both from the grafts and sides of the ulcer.

26th—Doing well, process of reparation going on pretty rapidly. The rays of tissue from the grafts, meeting those from the sides form bridges (as it were,) leaving small interspaces, which however are also closing up fast.

27th—Only three little openings now remain. "Red wash" dressing continued.

29th—Openings continue to close gradually.

Dec. 5th—To-day only one little opening remains. Ordered patient's clothes, allowed to move about the ward.

7th—Ulcer completely cicatrized, being covered with a layer of bluish white skin, which bids fair to be a strong and permanent cure.

MONTREAL, January 9th, 1872.

Case 13.—

J. O'D., *æt* 55, was admitted into the Montreal General Hospital on September 16th, 1871, suffering with two large ulcers on the anterior surface of the leg, one about four inches below the knee, the other on the anterior surface of the ankle. The borders were considerably inflamed, and the granulations large and indolent.

Dr. Fenwick ordered linseed meal poultices to be continued for three days, at the end of that time the inflammation had subsided greatly.

On the 26th October ordered the leg to be strapped according to Baynton's method. This had the effect of cutting down the tall granulations, and placing the ulcers in a fit state for receiving the grafts.

October 30th—Two grafts were taken from the arm and placed on the upper ulcer, the lower one being heated by the strapping. On this occasion no plaster being at hand, the grafts were covered with oil silk and done up with warm dressings.

November 2nd—When the oil silk was removed, one graft came away, the other remained adherent and presented a bluish white appearance, showing that it had become vital; the granulations surrounding it very healthy; warm water dressing applied.

6th—Grafts progressing favourably, new tissue forming pretty rapidly from the grafts, and also at the edges. But what of the lower one?

10th—Examined to-day, grafts doing well, but the lower ulcer completely healed under strapping treatment.

12th—The graft is doing a large amount of good to the upper one, the cicatrix is forming fast. The patient says it never was so nearly cured before.

13th—Ulcer just about closed, one small opening remains.

16th—The small space is gradually and steadily being closed, by the little shoots of tissue which are spreading out in all directions.

19th—Completely closed up. Patient leaves hospital to-day,

REMARKS—In this case skin grafting can hardly be said to have proved so eminently successful, it rather indicates that Baynton's strapping when properly and carefully applied, is just as efficacious and in this instance it proved a little more so; as to the permanency of the cure, I cannot speak, not having seen the patient since he left the hospital.

Case 14.—

J. K., admitted to the Montreal General Hospital, for treatment of an ulcerated surface situated on the front of the wrist, about two inches in length, by one in breadth of oblong shape, the long diameter being directed across the wrist, the result of a scald.

December 5th—A piece of skin was taken from the patient's arm, and divided into two grafts, each being about the size of an oat, they were placed on the ulcer, at about an inch apart and dressed in the usual manner with the isinglass plaster.

6th—Examined to-day, and in attempting to remove the lint, grafts and all came away together, however, they were again replaced. It being remarked at the time that it was very unlikely they would take again, having once been disturbed.

8th—The prediction proved true, they did no good whatever, but assumed a puffy white appearance; they came off and were not replaced by any more, but the ulcer was dressed with "red wash," and bandaged, under which treatment it healed rapidly. Now although the grafts failed signally in this case, the cure being effected just as rapidly perhaps as without them, still they can't be said to have had a fair chance.

Case 15.—

M. L., admitted into the Montreal General Hospital, to be treated for an ulcer situated on the outer side of the leg, the result of an application of some nostrum for the relief of a pain she suffered at its present site, that ended in producing this unhealthy ulcer, which at the time of admission was of some four or five weeks standing. It was circular in form, and about an inch and a half in diameter, its edges were thin and blue, and its surface studded with tall flabby pale granulations.

November 19th—Baynton's strapping was first ordered, but whether from any negligence or mistake on the part of the dresser, in its application, or from not being continued a sufficient length of time it failed in doing any good, other than that of cutting down the granulations, and giving to the sore a more healthy aspect.

29th—To-day the ulcer is presenting good soil in which to try the efficacy of skin grafting. A graft of about half the size of a five cent piece was taken from the thigh, and placed on the centre of the sore, and dressed in the same way as the others.

December 2nd—Grafts still in the centre of the sore presenting a dull white appearance.

5th—Still visible, but does not appear so healthy as when last examined.

8th—It remains in sight, but is not of the slightest benefit. Having neither formed an island itself, nor imparted to the ulcer any healthy action whatever.

12th—Graft has disappeared, in what manner I cannot say. Black wash ordered as a lotion, and dressed with lint and banded, under which it became rapidly cured.

Case 16.—

J. A., at 40, admitted into the Montreal General Hospital, November 14th, 1871, for treatment of two very large ulcers situated one on each leg, at the anterior surface, near the ankles, that on the left being fully five inches wide, and extending greater part of the way around the leg, the right not so large and situated more internally.

November 22nd—Blistering and poulticing continued until to-day, when, deeming the surfaces in a fit state to receive the grafts, four small pieces were placed in each about an inch apart, being well pressed in with the point of a bistoury; strapped down with plaster (isinglass) dressed with hot water and banded.

23rd—To-day four or five small grafts were placed on the right leg, and dressed same as above, to remain undisturbed for three days, the dresser merely changing the lint daily, but on no account to remove the grafts.

26th—Examined to-day, only three of the five on the right leg are visible, and three of those on the left. The remaining ones having disappeared as they occasionally do, preparatory to commencing their reparative process. Already there is some slight action begun on the edges.

29th—Not much to be seen as yet, only one or two of those little islands are forming.

December 2nd—Things are progressing more favourably now, quite a number of the grafts are forming islands of new tissue, and the healing process is going on. From the sides this is especially the case with the left leg, which is doing remarkably well.

6th—The right not having done so well as its fellow of the opposite side, is to be grafted again.

10th—Left improving rapidly.

12th—Four new grafts were to-day placed upon the right, and dressed as usual.

15th—The left continues improving, rays of tissue are shooting out from the grafts in all directions.

The last four are in sight, but look rather œdematous and puffy to augur any good results from them; the difficulty I fancy, lies in the fact that a large amount of pus is being exuded from the sore.

17th—The left is now improving rather slower than heretofore, ordered to be strapped (both legs were strapped.)

20th—Straps removed, and found the grafts on the right leg in site and looking well. All other modes of treatment stopped, both legs are now to be dressed with red wash daily.

24th—Still improving, right leg doing very well.

January 1st—Continues to improve but slowly of late.

2nd—There is no doubt but that the grafts have proved very beneficial in this case, for during the past month the ulcers have continued to improve slowly but steadily, and to-day are much better and nearer cicatrization than at any other time, since they first appeared.

Case 17.—

At its commencement this bid fair to be the most interesting of all, not only on account of the grafting, had it succeeded, but also for the many other peculiar circumstances connected with it.

It is that of Robert St. Hill, a negro, who was admitted into the Montreal General Hospital, suffering with sloughing of the cellular tissue of the penis, from infiltration of urine.

It appears that for a long time previous to his admission, he had been troubled with gonorrhœa, which in spite of treatment went into ulceration of the urethra, producing a fistula, and the urine instead of infiltrating as it generally does into the scrotum, or up into the cellular tissue of the abdomen, found its way as I said before, into the cellular stricture of the penis, giving rise to diffuse cellulitis of the organ, and sloughing of the tissue.

At first five incisions were made to allow the escape of pus, and poultices were applied for some time until the organ began to assume more natural proportions. When these were stopped, the integument was found to have sloughed from the whole under

surface of the penis, and also left a large granulating surface on top of the dorsum.

Upon these ulcerated surfaces skin grafting was attempted. The grafts being taken from the arm of one of his fellow patients, belonging to the "white persuasion." Mr. Pollock has tried the reverse of this and had splendid results, thus proving by the dark spot on the cicatrix, that the grafts had really succeeded.

But even though the grafts in this case had taken, it could not have been proven by the white cicatrix which would remain, as the effect, some might think of the white crafts, because it is well known that an abrasion or ulceration of the surface in the negro, in which the "rete mucosum" is destroyed, always when healed leaves a white cicatrix.

I do not propose in this, as in other cases, giving a daily report of the grafts which were tried: they did not succeed, and it would hardly be interesting to give a long list of the changes and appearances they passed through.

It is not to be wondered at that they did not take, because as the patient himself expressed it, "it was a werry critical position for the grafts to take hold of," and no doubt he was very near right, if not altogether so. For owing to the fact that the patient was continually troubled with erections, the change in the state of the organ would tend to disturb the grafts. Or this failure might have been owing to the irritation produced by the urine and gonorrhoeal matter which was continually being discharged, and must sometimes, especially at night during sleep, have trickled down about the grafts, irritating them and preventing them from taking on a healthy action.

Proceedings of Societies.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

MEETING HELD JANUARY, 27th, 1872.

The Society met in their rooms, the President HECTOR PELTIER, Esq., M.D., in the chair. After preliminary business, Dr. A. H. DAVID, read the following case:—

I have hurriedly put together the notes of a case that occurred a few months ago in my practice, and which soon ended fatally, and which I think is worth being given to you, from the fact, that

I believe many practitioners have never seen a case, or at least, if they have, have not recognized it, but mistaken it for some other form of disease. Although perhaps, its most essential features were recognized long ago—as long ago as the time of Sir Charles Bell, it is only within the last few years, since it was described and named by Duchesne, of Boulogne, as *Locomotor Ataxy*, that the attention of physicians has been drawn to it as a special disease. Before his observations were published, it was looked upon and mistaken for some form of cerebral or spinal paralysis—from which it is quite a distinct affection, although closely resembling it in many points.

Mr. R., 59 years of age, of spare form, of exceedingly active habits, and particularly temperate, a teller in one of our principal banks, suffered some years ago from Sciatica in the right side, which resisted all treatment, and he was persuaded by some of his "good natured friends," to visit a water cure establishment in the United States. He remained there about ten days or a fortnight, and returned home but little relieved. The very severe pain however gradually abated, and comparatively speaking, he was free from suffering for a couple of years, when the disease returned in all its severity, and he was again persuaded by his over judicious friends to return to the same water cure establishment. But he suffered so intensely from the treatment there adopted, which was pumping cold water on the thigh from a distance of 10 or 12 feet, that he only remained two days, and on returning home placed himself under my care, and the disease gradually subsided, and he remained well, *i.e.*, without any return of the Sciatica for some 7 or 8 years.

I mention these facts—merely as facts, to give his history as far as I am able, and not because I either believe or think, they had anything to do with the subsequent disease, although he himself could never divert his mind of the idea but that it was a return of his old attack, that notwithstanding the length of time which had elapsed; and that the cold water pumped on his thigh was the cause of his future disease, be that as it may, I think it but right to mention it.

About three years ago, Mr. R. began to suffer from severe pains in his thighs and legs. The pains in the right, the one in which he had had Sciatica some years before, as you will recollect I have mentioned—being much more severe than those of the left.

He fancied at first, it was a return of his old complaint—extending further than before, and called them "rheumatic pains" and did not apply to me for advice, but tried all sorts of liniments that are advertised as cures, for this and similar, and perhaps dis-

similar complaints—from Perry Davis' liniment to a saturated tincture of capsicums, but with, as you can well imagine, only momentary relief. He soon discovered that with the pains he had difficulty in walking, which of late has been termed *Asynergia*, or loss of Co-ordination of the muscular movements of the lower limbs, and is a pathognomonic sign, I may mention *en passant* of this disease. The pains and difficulty of walking, not amounting to paralysis of the lower extremities, but a staggering as it were continued more or less for near a twelve month, but never entirely left him altogether, when on the evening of the 12th March, 1870, while holding a step-ladder, for one of his sons to get up on to do some thing to the cornice in the drawing-room, he suddenly exclaimed that he saw everything double, and was afraid, (the pain in his legs being so severe, making him quite weak,) he would fall down, that he was assisted to the sofa, and his wife gave him a glass of strong brandy and water. After a short time, she finding him a little stronger, persuaded him to go to bed, he passed a pretty good night, but as the diplopia still continued, next morning I was sent for. On my arrival I found him up and dressed, lying on a sofa, he still saw everything double, his pulse was small and weak, but his mind was clear, his memory good, and the pains in the legs he described as severe, but not as intense as they had been the evening previous. This state of affairs continued for five or six days, when *one* of the visions, if I may so term it, began to be less distinct than the other, and the next day, that is about 24 hours after the *one sight or vision* appeared less distinct, whatever he looked at as well as being doubled, seemed to be going rapidly up and down, that is from the floor to the ceiling of the room, and from the ceiling to the floor. This peculiarity only lasted about 48 hours, and before the end of the week *his sight* had returned to its natural condition, and he saw as well as ever he had done, but the pains in the legs continued as severe as ever, and he tottered a good deal in walking, and was quite unable to go up or down stairs.

On closely questioning his wife, I discovered she had once or twice during the first days of his attack, noticed he had had squinting, but only for a moment or so, just sufficient for her to have observe it, but she thought nothing of it till I had closely asked her about it.

The treatment that I adopted was a combination of Iodide and Bromide of Potassium. But looking upon the case as one of Locomotor Ataxy, and of a serious character, I suggested the propriety of a consultation, and on the 31st March, Dr. G. W. Campbell, saw him with me. Dr. C. took the same view of the case as

I had, and as the pulse still continued exceedingly weak, suggested adding 10 grs. of the Citrate of Iron to each dose of the Potassium, which I did, he continued taking the medicines for a long time and gradually improved. During the summer he went into the country for a fortnight, and returned home very much improved, the pains had almost left his legs, he could walk well, all tottering had left him, and he returned to his work at the bank.

I should mention that during his illness it came to my knowledge, from conversations with the cashier, that the authorities of, and his fellow clerks in the bank, had for many months noticed a deficiency in his mind and memory, a want of recollection in counting bills and in such matters; and opportunity was taken of his serious illness, to remove him from the responsible position he occupied, to one where he would scarcely have any responsibility at all, but of course at a reduced salary.

This seemed to affect him a good deal, and from what I have since learned, he fretted very much about it—thinking he had not been well treated, but nevertheless he continued attending daily at the bank. During the month of January, 1871, his wife and family considered him better than he had been for years. On the evening of the 2nd February, on returning from the bank in as apparently good health as he had latterly enjoyed and partaken of his dinner, he went up stairs, and as he landed on the top step, suddenly called out he could not move. Asking one of his daughters who happened to be near to hold him, or he would fall, which she did till her mother came, and they assisted him to his room and got him to bed. I was immediately sent for, but being out of town, Dr. Smallwood kindly saw him for me, he found him partially insensible, and paralysed on the right side, he prescribed the usual treatment, and saw him again near midnight with Dr. Hingston, he was more insensible, and had had five or six of what his wife described as slight convulsions, and he continued much in the same state till death, which took place 36 hours from the time the attack had set in. I regret to say I was not allowed to make a post-mortem examination.

In the commencement of the paper I stated that this curious affection—Locomotor Ataxy is different and distinct from cerebral or spinal paralysis, and is not yet well understood. In most cases the pain in the legs, and which the patient usually calls rheumatic, are the first symptoms, and may continue for a longer or shorter period, sometimes for years, when double vision, with slight squinting follow these, as in the case just related, may disappear for a time and then return, and as in this case, end in epileptic convulsions, which carry off the patient. Again, the pains may

continue for months or even years, causing such weakness, that the patient cannot properly maintain his balance, he totters like a drunken man, indeed can scarcely walk, he has to a certain extent, lost the power of controlling the action of some of his elementary muscles.

The morbid anatomy has been well described by Dr. Lockhart Clarke. In two cases he examined, he found grey degeneration and disintegration of the posterior columns of the spinal cord; of the posterior roots of the spinal nerves: of the cornua and sometimes of the cerebral nerves. In the latter stages of the disease nearly all the nerve fibres of the posterior columns, and the posterior roots fall into a state of granular disintegration and ultimately disappear.

Usually the posterior columns retain their normal size and shape, in consequence of hypertrophy of connective tissue which replaces the lost fibres.

Corpora Amylacea are usually abundant, and oil globules of different sizes are frequently interspersed among them and collected into groups of variable shape and size, around blood vessels of the part; and Dr. Clarke is inclined to believe from his investigations, that the posterior cornua are always *more or less* affected, and he thinks they are the *first* parts that are mortally changed, and he thinks the peculiar symptoms of this disease depends solely on the lesion of the posterior columns, of the posterior nerve roots; but he adds, probably also of the posterior cornua.

Since I met with this case, I have been shown by a friend the "Bulletin General de Therapeutique," for January, February, and March, 1-63, in which are several articles by Dr. G. Dugardin Beaumetz, of the Hospital de la Pitié of Paris, in which he recommends phosphorus in the treatment of Locomotor Ataxy, and he says it appears to have a favourable influence in the progressive form of the disease, as it acts as an excitant and tonic to the nervous tissue, an indispensable element. He recommends it to be given in very small doses at the commencement, say about 1.60 of a grain, gradually increasing the dose till 1-6 of a grain is reached. But it must be discontinued as soon as the digestive organs become deranged. As I said before, I was not aware of this recommendation of Mons. Beaumetz, or I should most certainly have tried it. Although I must say in this case, the combination of Iron with the Iodide and Bromide certainly did a great deal of good.

PERISCOPIC DEPARTMENT.

Surgery.

NOTES ON A CASE OF RHINOLITH, OR NASAL CALCULUS.

By JAMES F. WEST, F.R.C.S., Senior Surgeon to the Queen's Hospital, and Consulting Surgeon to the Birmingham Dental Hospital.

The accompanying case is worthy of note from its extreme rarity, and from the fact of its producing loosening of the teeth on the opposite side to that on which the calculus was found. Nasal calculi generally, as in this case, form around some foreign body which has been accidentally introduced. This patient cannot remember anything having been inserted into his nostrils, so that probably it had been there for ten or more years, and its existence only became apparent when it led to a disagreeable discharge from the nostril, to bulging of the nasal process of the superior maxillary bone, and to loosening of the central and lateral incisors.

G. B., aged 17, a boy of strumous habit, and a parish apprentice to a tailor, came to the Dental Hospital in this town, on the 2nd of August, 1871. Mr. C. Sims, one of the dental surgeons of that institution, found the nose, especially on the right side, much swollen; and also much inflammation and tumefaction of the upper lip and gum. The central and lateral incisors were very loose. He had an offensive discharge from the nose, and was in much pain. He stated that the swelling came on suddenly two days previously, without any assignable cause. He had suffered six months before in a similar way, and was for a few days an outpatient at the Homœopathic Hospital, and then obtained relief by using fomentations to the nose. He had never had syphilis or any injury to the parts. Mr. Charles Sims, thinking it a case for consultation, brought the patient to me. It was decided as a tentative proceeding to extract the left upper central and lateral incisors, they being very loose. Mr. Sims removed them on the 5th of August; a copious discharge of very offensive pus followed the extraction. He was directed to syringe the mouth and nose with ozonised water.

The gum quickly assumed a healthy appearance, and the boy was much relieved. He attended as an out-patient at the Queen's Hospital: but not getting much better as to the nasal symptoms, on November 13th I made another examination of the patient, when an oval calculus, weighing twenty grains, was discovered by a probe, and removed with dressing forceps in two pieces from the right nostril. It was half an inch in length, and a quarter of an inch in breadth, and was composed of phosphate of lime and magnesia concreted around a pebble the size of a large pea. The punctum lachrymale on that side was so closed that no tears could pass into the nostril. I therefore deemed it necessary to slit it up, and to pass an Anel's probe down the nasal duct.

On November 20th the nose was much less swollen; the discharge diminished, and the tears were passing naturally into the nose. The lachrymal probe was again used. No caries of bone has taken place. The nose is nearly of its proper proportions, and the boy is quite well.—*Lancet*.

BIRMINGHAM, January, 1872.

CASES OF STRANGULATED HERNIA.

Under the care of J. FAYRER, M. D., C. S. I.

CASE I.—Modun Mohun, a Hindoo sircar, aged 45, was admitted on the 15th May, 1871, with symptoms of strangulated oblique, inguino-scrotal hernia on the right side. The hernia was of four years' duration, but had hitherto been reducible, and the present symptoms, pain in the tumour, which was very large, and in the umbilical region, constipation and constant vomiting, had set in about two hours before admission. His pulse was weak and depressed. The usual measures, chloroform and taxis, &c., having failed, the operation for strangulated hernia was performed without further delay. The stricture was found to be at the external ring; it was divided, without opening the sac, and the hernia reduced. The wound was antiseptically dressed, healed rapidly, and he was discharged, cured, on 29th June, 1871.

CASE II.—Mohesh Chunder Bose, a Bengalli, aged 55, a broker, was admitted on the 13th September, 1871, with symptoms of strangulated oblique, inguino scrotal hernia on the right side. The hernia was of fifteen years duration, had once been strangulated before, but was reduced by taxis. The symptoms, vomiting and constipation, had been present for some time. All the ordinary measures for reduction having failed, the operation was per-

formed. The stricture was found to be at the external ring, and was divided without opening the sac. The wound healed, and he is now well, and waiting to have the operation for the radical cure performed.

CASE III.—Fakcer Chand, a Hindoo trader, aged 70, a very infirm old man, was admitted on the 11th November, 1871, with symptoms of strangulated, oblique inguino-scrotal hernia on the left side. It was only of three months duration he said, and was not very large. It had never before been obstructed; the symptoms of strangulation, vomiting and constipation, with pain in the tumour and abdomen, had set in twenty hours before admission. The ordinary measures—taxis under chloroform, enemata, ice applied to the tumour—having failed, the operation was performed. The stricture was found at the external ring, and was divided without opening the sac. He was immediately relieved of symptoms of strangulation, but sank on the 17th November, with symptoms of gangrene of the scrotum, and chronic dysentery.

On examination it was found that the lungs were congested. There was a fibrinous clot in the right auricle, extending into the ramifications of the pulmonary artery. The lower portion of the ileum was partially gangrenous, but not perforated. The scrotum was gangrenous. The kidneys were extensively diseased. He was a very infirm old man, and had no power of recovery. The gangrene of the scrotum was probably caused, in his debilitated condition, by the attempts at reduction by taxis before operation.

CASE IV.—Nilmoney Paul, aged 45, a stout aged looking man, by occupation a clerk, had suffered from inguino-scrotal hernia of the right side for five months; the tumour was very large, and the hernia had previously been reducible. When the symptoms of strangulation set in, the hernia had been incarcerated for two days; it had come down when travelling on the railway, and he could not reduce it. When I saw him on 5th November, 1871, the symptoms of strangulation were urgent, and general peritonitis was setting in.

I operated without delay, and had to divide thick layers of adipose tissue, before the stricture which was at the external ring, and in the canal at the margin of internal oblique and transversalis, was reached; it was divided without opening the sac. The symptoms of strangulation were immediately relieved, and the

bowels acted freely, but he never rallied, and sank five hours after the operation.

He was evidently of an unhealthy constitution, and had probably bad kidneys.

No *post-mortem* was permitted.—*Indian Medical Gazette.*

BILLROTH ON ACUPRESSURE, ACUTORSION, AND TORSION.

In fifty cases of amputation Professor Billroth performed acupressure or acutorsion, using on an average four needles in each case; he has performed it on two hundred arteries, including fifteen cases of amputation of the thigh; he has had no opportunity in cases of amputation of hip-joint, having had no cases lately; in exarticulation of shoulder he never succeeded in fixing the needles firmly enough to rely on methods above named. Acutorsion was performed more, acupressure less frequently, acufilapressure in no case. Hæmorrhage following removal of needles occurred in one case only; he accounts for it by his having performed acupressure according to the first English method, compressing against the integument, the brachial artery, the median nerve, and belly of the biceps muscle; this caused fluxion to the compressed parts; removing the needle, they receded, tearing the adhesions which had compressed the artery. He therefore abstains from acupressure *en masse*, and recommends careful acutorsion. In acutorsion, he considers one half turn sufficient, and preferable to a whole turn or more, since the needle is removed more readily. Gold needles occasionally become bent if very long; but they can be removed without causing irritation, and are therefore preferable to all others.

Prof. Billroth attempted torsion in several cases of amputation of the breast, with such negative results that he abstained from it until again led to it by English surgeons, and Porta, who performed it four hundred times without secondary hæmorrhage (out of 23 attempts of torsion of the femoral artery he failed four times, and applied ligatures.)

During last summer Billroth performed torsion in five amputations of the leg, two of the foot, two of the fore, and one of the upper arm; also upon the greater number of arteries in several amputations of the thigh.

Secondary hæmorrhage occurred in one case, from the posterior tibial; he believes this was due to his having forced the torsion. To perform torsion successfully, he considers it necessary—1. To isolate the vessel thoroughly; 2. To grasp the end of the same with a strong, well-fitting pinzette: 3. There must be a certain length

of vessel from the end to the nearest branch. These conditions are not given in the mamma, hence his previous failure.

Although Porta recommends making but slight traction, four to five turns in small, and six to eight in large vessels, Billroth has in every case drawn out the vessel from one to one and a half inch, and turned the pincers until the vessel was torn asunder, one portion remaining in the instrument, the other receding; this was done to alter the walls as much and as far as possible, in order to gain an extensive thrombus.

Post-mortem examination has proved these views to be correct; the advantage of an extensive thrombus is, however, counter-balanced by the fact that vessels isolated for a greater distance, and denuded of their sheath, become necrotic. In cases below the knee and elbow, Billroth considers torsion advisable, if not too near a larger branch.—*New York Medical Journal*.

BILLROTH ON OVARIOTOMY.

This eminent surgeon, in his "Reminiscences," published in the *Weiner Med. Wochenschrift*, says of Ovariectomy:

First of all, surgeons must dismiss from their minds that ovariectomy is a dangerous operation; and, through the medium of well-informed practitioners, this conviction must make its way with the public. After ovariectomy, skilfully performed according to the rules of art, recovery is the general rule, and a fatal issue the constantly-diminishing exception. Comparing it with some other operations, ovariectomy, taking the mass of cases, is shown by statistics to be less dangerous than amputation of the thigh, disarticulation of the shoulder and hip-joints, or excision of the hip or knee. Its danger is about the same as that of amputation of the arm, excision of the shoulder, partial excision of the jaw, lithotomy in the young, and similar operations. We must, however, perform ovariectomy strictly according to the rules laid down by the English operators in their classical works; and only after having attained the same results should we venture to practically put into force our own ideas, in order to improve upon these. I had the good fortune to see Spencer Wells operate upon two complicated cases, and from them, as well as from oral communication with this remarkable man, I learned much. I constantly follow his precepts, knowing that he has long since thoroughly thought out and tested all that can happen to myself. I shall willingly regard myself during my lifetime as his scholar; and contented shall I be if it falls to my lot, by means of this operation, to snatch

from certain death one-half of the number of lives he has been enabled to save.

Up to the present time I am tolerably contented with my results. I give here a short account of them, in order to encourage the performance of these operations, and especially to inform the colleagues into whose hands these lines may fall that I have personally, no reason for supposing that the results attendant upon ovariotomy will be less cheering in Vienna than they are in London. Hitherto, I have performed it nine times; and of these patients only two have died, giving, therefore, only a mortality of 22.2 per cent. The first four cases recovered one after another; then two fatal cases occurred, to be followed again by three recoveries. The first case is related in my Zurich "Chirurgische Klinik," and the second, third, and fourth cases in the "Chirurgische Klinik," published at Vienna, in 1868.

Medicine.

BLACK SMALL-POX, AND ITS TREATMENT.

Mr. John Aiken, of Glasgow, has the following valuable article in the *Glasgow Medical Journal*:—

The onset of this fearful form, in most of its symptoms, resembles that of ordinary small-pox. It is attended by the usual sickness, fever, furred tongue, etc., but in addition there is very great oppression of the breathing, and great prostration of strength. The pain in the back, so often looked upon as pathognomonic, is quite a variable symptom, its place being occupied by the hurried and oppressed respiration. The patient is usually brought to the hospital about the fourth or fifth day of the disease, but in a few cases we have had the privilege of observing its progress from an earlier date. The ordinary state of patients on admission, and progress of the disease, may be described as follows:

The patient lies on his back, apparently exhausted, the legs stretched out, and the arms and hands lying as if powerless, by the sides. The face is flushed, and a deep red colour, with more or less of a cyanotic hue. The respirations are hurried, imperfect, and not filling the chest—often exceeding 30 per minute. The pulse runs from 100 to 140, and, at this time, is full, but soft, and often intermitting. The skin is hot, and gives to the hand a feeling of acridity, while the thermometer records from 104° Far.

to 106° Fahr., and in one 108.2°. In many cases, and especially in the early stage, the skin is excessively tender, the patient suffering acute pain, even from an attempt to examine the state of the pulse if not very gently conducted. The corneæ are preternaturally bright, and sometimes the conjunctivæ are injected while the eyelids are swollen and of the same dusky red as the face. The skin on the surface of the body has a similar appearance. This congestion, for the first few days, disappears on pressure, but is freely intermingled with a punctated ecchymosis. In the most rapidly fatal of those cases, there is always no trace of a vesicular rash, while in others a few scattered vesicles of ordinary size may be distinguished, and in most favourable cases a very flat rash of a vesicular nature may be found shining through the cuticle like so many white spots, yet never developing sufficiently to be perceptibly raised above the surface of the skin. It can be felt beneath the cuticle like grains of sand freely sprinkled over the skin.

As the case proceeds, the points of ecchymosis, sometimes slowly, but sometimes with fearful rapidity, increase in size and number, and, coalescing, form large collections of extravasated blood. A similar effusion soon takes place from the conjunctival vessels, so as to form mere sacs of dark-coloured blood, more or less burying the corneæ. Should the patient be a female, from a comparatively early period in the case we find uterine hæmorrhage. This may commence at any period between the second and fifth day, but more frequently toward the fifth. At first the blood is fluid and dark in colour, but, as the quantity increases, it is discharged in the form of large, dark-coloured clots, which are easily broken down. In some cases the quantity lost may be so great as actually to cause death. Such was the case in E. R., a young woman 23 years of age, who died with all the symptoms of post partum hæmorrhage, on the seventh day of the disease. A careful inquiry could elicit no possibility of early pregnancy; in fact, the girl stated that she had menstruated almost immediately before her present illness. It occasionally happens that hæmorrhage occurs at or near a menstrual period; but although this is a noteworthy circumstance, it is not a fact of great clinical importance. The ordinary menstruation occurs, as usual, during small-pox, often slightly increased in quantity; but this has no prejudicial effect, but rather the reverse, as it frequently is followed by a relief of the mental disturbance, and occasionally an abortion of the rash. If, however, the case be one of hæmorrhagic small-pox, the quantity discharged soon becomes excessive, and all the characters of normal menstruation are lost. Towards the close of the

fifth or on the sixth day (sometimes a little later if the patient be a female,) the sputa become rust-coloured, and the oppression of the breathing rapidly increases. The quantity of blood becomes greater hour by hour, until the expectoration has the appearance of tar mixed with viscid mucus. In one case, to which we shall afterward have to refer, bright arterial blood welled from the mouth in the form of a fine froth for several hours. It was carefully ascertained that in this case there was no epistaxis. The urine about the same time becomes first tinged or smoky, and then loaded with dark coloured blood—never in the form of clots, but occasionally containing fine shreds. The stools toward the close contain blood in large amount, either in a tarry state intimately intermingled with feces or in a fluid state evidently shed from the lower bowel—the fecal matter, when distinguishable, being very pale in colour and clay-like.

The subcutaneous ecchymoses increase until large masses collect in a cellular tissue, distending it, and raising lumps as if of recent bruises. Sometimes this takes place in the forehead and eyebrows, causing them to overhang the eyes, and giving to the whole face a most repulsive expression.

Such a state never lasts long. The temperature, which has hitherto been six or seven degrees above the normal, suddenly falls beneath it; the pulse runs up until it is almost uncountable, frequently intermitting and very feeble; the respirations increase in frequency and decrease in efficiency, the air being but little carried into the lungs, though the struggles of the patient for breath are agonizing. Blood pours from all the mucous surfaces, and, oozing through the distended conjunctivæ trickles over the cheeks with the tears—giving to the face, already sunken and death-like, an aspect more disgusting than it is possible to describe, and causing one to wish for the termination which so soon relieves the sufferer. During the greater part of the time the patient retains his consciousness, and it is only at the very conclusion that the sufferings are veiled by the advent of semi-coma. In children I have seen obstinate bleeding from scrofulous ulcers on the neck. The blood shed was fluid and very dark in colour, and the bleeding was not controlled by touching the surface of the ulcers with nitrate of silver.

Until the end of May last not a single case was known to have recovered.

Before long I became satisfied that we had to deal, not with extraordinary virulence of the small-pox poison, but with its development in a peculiarly fitting soil; in fact, that it was not the epidemic nature of the disease, but the condition of the patient,

which was the main determining cause of the type. A fortunate sequence of cases suggested the seat of the mischief. It was a well known fact that a change of residence from the country or a small town, where a person has been constantly employed in the open air, to a large city and an in-door employment, is followed by very marked symptoms of impaired nervous energy. This history and these symptoms preceding the commencement of the attack I found in a number of consecutive cases, and I was thus led to extend my inquiry into other causes of enervation in the previous history of the patient. Epilepsy, paralysis, chorea, and other causes of impairment of the nervous system, appeared in the previous history of some, while in others, where the cause of nervous lesion was not so evident, nothing more than previous symptoms could be elicited, attributed to confinement in close or ill-ventilated work-shops, heat, or some other depressing agency. The great prostration and the tendency to hypostatic congestions which I observed invariably in such cases strengthened my opinion. Having thus been satisfied that the lesion lay in the nervous system, the next step was to try what could be done in the way of treatment. I chose strychnia as the most powerful nervine tonic with which I was acquainted, and determined to push its use to the greatest extent possible. The following was the mixture used:—

R—Liquoris Strychniæ.

Tinct. ferri hydrochlor., aa ʒj.

Inf. quassia, ad ʒviij. M.

Sig.—One to be given every three hours.

Considerable fear was entertained at first lest mischievous effects should be produced by the large doses of the strychnia in the exhausted state of the patient, but experience showed that ʒjss of the *Liquor* might be given in the twenty-four hours, *if the case was very severe*, and yet no physiological effect be produced; while in an ordinary case, in which merely ʒj. per diem had been given, slight trismus and pain and twitching in the muscles of the neck resulted.

In those instances in which the case came under treatment early, our results were very satisfactory. If the hæmorrhage had not yet commenced, it was often prevented, or merely occurred to such an extent as to show the tendency; while if it had commenced, packing in wet sheets for a few hours was found a most valuable adjunct to the treatment. Mr. Greaves had previously satisfied himself that this practice had a beneficial, though transient, effect upon the hæmorrhage; but it had been discontinued

on account of the great exhaustion it produced, which we now found could be avoided by the combination and the administration of a small dose of stimulant on the removal of the pack. The next beneficial effect noted was the relief to the respiration. The crepitus, which before could be heard all over the back of the chest, diminished, and the respirations became much more efficient and decreased in frequency. The colour of the face improved, the pulse became steadier, and the ecchymosis disappeared. The rapidity with which this latter effect took place was a matter of great astonishment to us all. I have seen a young man brought in with the whole skin like the colour of the bloom upon a plum, the breathing rapid and oppressed, the urine containing a large quantity of blood, while not a trace of rash could be found on the body; and in three days the ecchymosis disappeared, the breathing became tranquil, the urine clear, and a copious small vesicular rash was developed upon the skin. This now introduces the next feature—viz., the development of the rash. This usually takes place to a greater or less extent within the first twenty-four hours of treatment; but it is not the ordinary rash of small-pox. It consists of a greater number of minute vesicles, which continue flat, and as the case progresses, coalesce, detaching large pieces of the cuticle, which is raised into enormous blebs sometimes standing three-fourths of an inch above the surface, and filled with a sero-purulent fluid. These burst and form crusts which eventually fall off, leaving no pits, but a tender pink skin beneath, which was often the seat for some time afterward of furfuraceous desquamation. This development of rash after the use of strychnia I have seen in cases not of a hæmorrhagic type, and was, thus led to adopt the rule never to give it until the rash had fully declared itself.

My colleagues and myself have now treated in this way over forty cases which came under treatment at a time when there was a possibility of doing them good—viz., either before the commencement of hæmorrhage, or before it had become alarming; and we have had the satisfaction of guiding fully two-thirds of such cases to a successful termination; while under any other method we believe they would have died.

CASE OF SNAKE-BITE.

Communicated by J. FAYRER, M.D., C.S.I.

I am indebted to Major C. A. McMahon, Officiating Commissioner of Hissar, for the following very interesting account of a case of death from the bite of *Bungarus ceruleus*, in which hæmaturia was

a prominent symptom, and where life seems to have been prolonged by the internal administration of stimulants.

From Major A. C. McMahon to Dr. Fayer.

I enclose an interesting account of a death from snake-bite.

Mr. Davis, a customs' patrol, was bitten on the 31st of August, (evening,) and did not die until 11 a.m. on the 3rd of September, having been kept up by ammonia and brandy all that time. The case is interesting, because Mr. Davis had skilful treatment from the first, and the most approved remedies appear to have been applied. Mr. Davis became perfectly insensible almost immediately after he was bitten (showing that the poison was powerful and active) and yet he was restored, not only to consciousness, by the internal administration of ammonia and brandy, but he became sufficiently well to do some work, and sign some official papers, (the latter part is not mentioned in the accounts I send you,) the influence of the poison having been checked for so long, one would hardly have anticipated a fatal termination about 63 hours after the poison was received into the system. It almost seems as if when a man is being bitten by a full-grown cobra, or krait, stimulants only postpone the fatal hour.

The case is an interesting one, and I shall be glad to hear your opinion on it.

The snake was evidently a krait. How ignorant men are of what snakes are deadly and what are not! Mr. Davis surely did not know.

The two accounts I enclose are by Mr. Edwardes, District Superintendent of Police, Rohtuck, and the Sub-Assistant Surgeon of Honsi. I think they give, taken together, a very full, complete, and accurate account of the case.

Statement of Mr. F. N. Edwardes.

On the 31st August, 1871, I was on my tour of inspection at police station Mahim in this district, and on the customs like. A Mr. Davis, an assistant patrol, went out patrolling on foot in slippers in the evening, and returned at 8.30 p.m.; as he entered the gate of the compound, he was bitten on the instep by a small snake, a karite or krait, or kerite. He had time to kill the snake, which was about two feet long, of a yellowish colour, with blackish stripes across its back with his slipper. On Mr. Davis being bitten, he called out to the guard at the "thuk" (or weighing house,) to bring a *lattie*, and by the time the men reached a distance of not 100 yards, Mr. Davis was insensible; they brought him to me at 8.30 p.m., or a few minutes after he was bitten, with the part bitten bleeding and a string tied under his knee, which I fancy he

himself tied. I gave him ammonia and brandy in a wine-glass, cut the part where he was bitten with a penknife and rubbed ammonia into it; on my giving him the second or third dose and rubbing his foot with ammonia and having him walked about, he came round, and at 9 p.m., was all right and perfectly sensible. I still kept walking him about and giving him small doses of ammonia at short intervals,—first with brandy and afterwards without, as he did not like the brandy. About 10 p.m., I allowed him to sit down in a chair, he then became a little sick, but came round again. I left him at 11 p.m. perfectly sensible, and the only thing he complained of was a pain in his leg. I was obliged to come into Rohtuck and was myself unwell. Shortly after Mr. Davis was brought in and after he came round, I thought it as well to send for the customs' native doctor at Hansi, and wrote him a putwanah, ordering him to come to Mahim at once, and on my reaching Rohtuck, I wrote to Mr. Davis' brother, telling him of the case and advising him to go out; he went out on the 1st September, and tells me found his brother very well, but complaining of the leg being tied up and wishing to open it; he remained perfectly sensible and well that day, that night, the next day, the 2nd September, and that about 1 a.m. of 3rd September, began vomiting; at first he thought it was nothing, but on his vomiting a second time he got up and attended to him. On his asking his brother how he felt, he said that he found his chest paining him a great deal, and complained of suffocation; after this he tried to vomit again, by putting his finger down his throat, but failed. The native doctor was present, and continued giving ammonia with brandy. He after this once fainted and began to get weaker and weaker, and after about 3 a.m., he did not speak, and died about 11.30 a.m. On the 3rd September, Mr. Davis states, that after he fainted, he got convulsive, three times, that on the 2nd September, about 3 or 4 p.m., he remarked that his brother was passing blood in the urine, stools, also from the part bitten, and vomiting. Mr. Davis states that he remarked the blood getting blacker and blacker as death approached.

ROHTUCK, 6th October, 1871.

Statement of case by Sub-Assistant Surgeon B. R. Paul.

With reference to your docket No. 773, dated 9th instant, I have the honour to submit the following particulars of Mr. E. F. Davis's lamentable death, which occurred on the 3rd ultimo, at 11 a.m.

On the 31st August, 1871, Mr. Davis after taking his dinner at 8 p.m. with Mr. Edwardes, Assistant Superintendent of Police, Roh-

tuck, (who had come to Mahim on his tour of inspection) went out patrolling on foot towards the Han-i line, and on his return, not very far from his bungalow, just near the *naku*,* he saw a small, thin, black and white snake lying on the road, which he attempted to kill with his foot, but the slippers he had on being loose, unfortunately came off, and the snake bit him on the right foot, just above the great toe. He, however, killed the snake and walked a few steps, when he fell and became quite insensible and was carried by some of the peons to the bungalow.

Mr. Edwardes immediately administered some strong doses of brandy and liquor ammonia (which I had left with Mr. W. Forster for snake-bite,) which made him vomit and brought him to his senses; he was kept awake all night, and brandy and ammonia were administered frequently.

On the morning of the 1st ultimo, at 9 a.m., I received the notice and immediately started with a proper supply of medicines to Mahim, and found Mr. Davis, though quite sensible, yet very uneasy; his right foot and leg up to the thigh were very much swollen, and in several places had become blue, especially at the bitten part, from which blood was oozing in drops owing to its having been previously incised by the knife, and a kind of stone, called *zahr-mohr*, was applied for the purpose of absorbing the snake poison. The pulse was slow, respiration not difficult, pupils slightly contracted, urine frequent and consisted of pure blood; sputa also frequent and consisted of pure blood; complained of great thirst and feeling of uneasiness throughout the whole body; stabbing pains now and then at the bitten parts; stomach very irritable and would not retain anything.

Treatment.—Stimulating mixture with liquor ammonia was exhibited every half an hour, which was retained; the swollen parts were fomented with decoction of *meen*, which greatly relieved the pain, and reduced the swelling, and the patient was not allowed to sleep.

On the morning of the 2nd, he said he felt better, sat down for half an hour on an easy chair, and took a little sago, which was retained; pulse a little improved, but the urine and sputa still bloody, though less frequent. Stimulating mixture continued every second hour, instead of half an hour; fomentation continued.

At 2 p.m., he complained of severe pain in the abdomen, which was relieved by hot fomentation, but he made several unsuccessful attempts to evacuate his bowels.

At 5 p.m., he asked to have some chicken broth, and wanted to

* The high thick thorn hedge carried across the country by the Customs Department to prevent smuggling. Neither man nor beast can get over or through it.

have an undisturbed sleep, which were allowed, as now it has been more than 48 hours since he had been bit.

At 10 p.m., a relapse took place; he vomited the broth, mixed with a large quantity of blood, and felt very uneasy and prostrated; stimulating mixture with liquor ammonia was given, too, frequently every quarter of an hour.

At 12 p.m., he again felt worse, suffocation and headache ensued; his bed was taken out into the verandah, and the medicine was continued.

At 2 a.m., the patient got very weak and insensible: pulse very low, breathing very difficult, convulsions commenced, and he could only be roused by loud calling, and with difficulty could swallow the medicine which was given.

At 4 a.m., he became comatose; could not be roused at all, neither could he swallow medicine or water; cold perspiration broke out over the face, eyes depressed, extremities became cold, pulse scarcely perceptible, breathing prolonged and stertorous; convulsions more frequent; twitching of the right hand and beating of the right foot, the left side of the body became paralysed, eyes insensible to light and congested, involuntary discharge of bloody urine and stools, and at 11 a.m. he breathed his last; his corpse was carried into Rohtuck for interment by his brother, Mr. Davis (Head Clerk, Deputy Commissioner's Office, Rohtuck,) who arrived at Mahim at the same time as I did.

In conclusion, I would beg to state that Mr. Davis solely died of snake-bite, and had no other disease. *He was addicted to opium.*—*Indian Medical Gazette.*

HANSI, 10th October, 1871.

ABSTRACT OF AN ADDRESS ON THE ADVANCEMENT OF MEDICINE.

Delivered at the Annual Meeting of the Clinical Society of London. By Sir WM. W. GULL, Bart., M.D., D.C.L., F.R.S., President of the Society.

In addressing you this evening, gentlemen, I have in some sort to throw myself on the forbearance of the Society, for, though I have been able to bring certain ideas together on the subject on which I desire to speak, I have not, for want of time, been able to adopt a form of words such as I would have liked. In some sense I am the spokesman of the Society as its President, in especial when laying before the public the objects of the Society as I would now do.

We, in our calling, differ from some theologians in one important respect; they look on this world as a decaying world, as much worse than it once was; we, as students of nature, are opposed to this view, for if we look to the history of nature we see we are ever advancing towards perfection, even if we are not likely to reach it. This is an improving world, and we are met to advance that idea. We believe that this world has something better in store for all than anything which has yet been seen, and are like to the convalescent, whose last day should be always the very best he has ever spent. Some men are apt to think that science has certain limits set to it, beyond which no man may go; but we believe that knowledge extends far beyond the strictly scientific limit. Doubtless, were the early lower animals assembled together in conclave, they would conceive it quite impossible to transcend their status; that when the world came to megatheriums, let us say, then it must stop. They could not conceive the possibility of such a being as man. But at this point we join the theologians again in accepting a metaphysical element, in forming conceptions of things of which we have no positive knowledge. In this way we may be said to worship nature, but only in a very limited sense. We look upon our being, not as perfect, but as becoming perfect, and, we are here to-night—and at all times have it as our object—to improve these defects of nature, and in endeavouring to perfect the human frame.

Respecting the object we work for—this living organism of ours—one great advance has of late been made. We are acquiring a physiological notion of disease. Disease is no entity; it is but a modification of health—a perverted physiological process; and this must at all times be insisted upon. Were it not that we fear death, and dislike pain, we should not look upon disease as anything abnormal in the life-process, but to be as part and parcel of it. Few would now venture on a definition of disease; for in reality it is but the course of nature in a living thing which is not health. In health the balance of function is even; incline it to either side, and there is disease. That being so, just as the life-process constitutes an individual and puts him apart from his fellows, so must any alteration in it be individual, and not general. But to the ignorant disease is an entity—an evil spirit which attacks us and seizes us. Hence arises the word "seizure," which, though in a somewhat different way, we still use, but with a protest. To the charlatan, di-ease is a set of symptoms to be attacked by a variety of drugs—a drug for each symptom. To us, disease is a life-process of a perverted kind.

Many states are not now called diseases which used to be, and

there are still some to be expunged. Some people are always ailing. Some have feeble stability, and to them it is as natural to be ill as it is to others to be well; but this is not disease. So, too, aged persons get ill; but this is not disease—in reality it is natural change simulating disease, and when we try to cure such we use all the farrago of the chemist's shop to prevent the sun setting. So syphilis at last ceases in the system to be syphilis, and becomes an early decay.

It is curious to consider the various morbid agents at work within our bodies, the lines in which they work, and their seats of action. These as yet have been but little studied, and deserve attention. Thus, it is very doubtful if scarlatina begins in the blood, as we should all be apt to say, rather than in any other tissue or fluid. Let it be our object to find out where all these begin within the body, and how they enter the body. In future, I hope, comparative pathology, which is just beginning to be studied, will teach us much; for in our bodies we men have many organs which are of little or no use to us, and are only relics of a former state of being. What, for instance, is the comparative anatomy of tonsils? Were I to make a man, I do not think I would put tonsils on him. Yet these, and such like organs, in accordance with the general law, are more prone to disease than are the others which are of real use in the system. I remember the case of a man who had a permanent vitelline duct. He had been out on a cold day, and the motion of the intestines twisted them in a mass round this persistent duct, and he died. I made a preparation of the duct, and wrote under it—"Cui vitam atque mortem dedit diverticulum." Every part of the body is alive, and has its own individual life and pathology, whether it be immediately required or not; only, if not required, it is more prone to disease than if it were. I could, for instance, suppose a fœtus of four months going to the doctor and saying—"I am going all wrong; my Wolffian bodies are disappearing, and kidneys are coming in their stead." Yet that is as much a condition of disease as some of those conditions of which I speak.

It is of the utmost possible importance, then, to be able to tell what we have and what we have not to cure. How often do we find people trying to do what is impossible. Some women have no more vital capacity than a canary bird; they are constantly ill, and it is useless to attempt to make them well. A man came to me, and said: "I don't know what to do with So and so. I have given her everything I could think of, and she will not get strong." "Why," I said, "you have been trying to put a quart into a pint pot. You cannot make her strong, and never will."

So, when a new instrument or mechanical means of diagnosis is introduced, we must try to make ourselves masters of it, so as to be able to use it aright, even though this is troublesome to ourselves; only we must beware of applying the knowledge thus acquired too early to practice. Thus, as regards the thermometer, doubtless it yields us most valuable information, but we must beware of using it as a guide to our treatment until we have a more complete knowledge of the condition of bodily temperature.

But after the physical comes the vital diagnosis. It is well to know exactly what is the condition of each part of the system; but to what is the wrong due? That no weighing or measuring can give you—only experience. A man has pneumonia—that is a too vague fact: what are the dynamics of the disease? One man with a pneumonia will get rapidly well and be right again in a few days, whereas another man will not get well at all. So, in different individuals, a form of disease apparently the same may be different from the beginning, and this we cannot always make out in our diagnosis, especially in internal disease. In skin diseases we can do better.

During the last week I have been called on, as most of you know, to form a diagnosis of the workings of the mind. Here the break-down may be the first sign of the diseased condition, just as it may be in heart disease, peritonitis, and a score of other diseases. A man, after racing up a hill, finds himself breathless and spitting blood. He comes to you, and you find heart disease. It does not mean that the heart disease was produced by running up the hill; it only means that an organ, equal to its ordinary duties, failed when unusual stress came to be laid upon it. So is peritonitis often the result of disease previously latent, but brought on by exposure to cold, or some such agency. Some men say that such cases as those of doubtful sanity should not be taken up by us—that ordinary men are quite as well fitted for finding out the truth as we are, with all our training. If so, all I say is, that it is no honour to us that it is so.

Now therapeutics is the end, though the study of diseased conditions might be pleasant enough by itself. We are sometimes twitted with letting Nature alone to do her work. We do not. And here, again, we join issue with the theologians. They say, "If it is God's will that a man die, so be it." But say we, "God's will is to be found out; it is not a mere fate." We are not ignorant worshippers of nature, and whether a man is doomed to die or no, we know only by the result. We are connective agents. We have to adjust and correct. We know the tendency to recurrence to

the equilibrium—that is, health—and we endeavour to assist in adjusting this balance in each individual.

In fever, for instance, two things are promptly at work—destructive changes, and changes tending to recovery. In such diseases there are certain superficial accidents which we are apt to notice. In fever there are often complications; but these are really part of the fever-process, and are not to be interfered with by themselves. Our study must be, how best to bring the condition to a safe ending; for a patient in fever may get well of the fever, and yet die of a bedsore.

In conclusion, if I have spoken more as regards medicine than as regards surgery, I think the surgeons ought to be indebted to me for hints towards the extirpation of superfluous organs—a grand prospect for the surgeons of the future.—*British Medical Journal*.

PUS AND PUS CORPUSCLES.

The *Times and Gazette* remarks that two highly interesting memoirs on the chemical composition of pus corpuscles, and on the chemical composition of pus, by Drs. MIESCHER and HOPPE-SEYLER respectively, have recently been published (Hoppe-Seyler's *Med. Chem. Untersuch.*, 1871, pp. 441-486); indeed, Prof. Hoppe-Seyler—no mean authority—regards Miescher's researches as the most important contribution that has been made of late years to the chemistry of pus. We propose to briefly summarize the results arrived at for the benefit of our readers.

Miescher, in order to obtain pus corpuscles free from serum, treated pus and fabrics impregnated by it with saline solutions of appropriate density. In these liquids the pus corpuscles sink to the bottom of the fluid, and may be obtained tolerably pure by repeated washings. Attention was first directed to the albuminoids of the protoplasm.

Pus corpuscles are mainly composed of albuminoids, and, when treated with solution of common salt, they are converted into a viscid gelatinous mass—a change dependent, as Roviola has shown, on the formation of a ring of hyaline substance around each corpuscle; but this is not due to myosin, for Miescher could obtain no reaction for this body. Five albuminoids were obtained, agreeing (in number, at least) with the five different albuminoids found by Kühne in muscle. These were—alkaline albuminate, undetermined whether kept in solution by alkaline phosphate or not; an albuminoid coagulable at 118° to 120° Fahr., which was not merely albumen dissolved in alkaline phosphate; an albumi-

noid coagulable at the temperature at which ordinary serum albumen coagulates; Rovida's hyaline substance; and a fifth albuminoid, the reactions of which need not be described here. Miescher was unable to detect paralbumen, though he does not deny its presence. The alcoholic extract of the globules was only investigated for lecithin and cerebrin, both of which were found to be present, the former in abundance. No gluten or chondrin was found in the watery extract, nor in the serum of pus.

It must be understood that a mixture of lecithin and cerebrin forms the substance to which Liebreich assigned the name "protagon," a highly phosphorized material, for lecithin leaves, on incineration, produce an ash very rich in phosphoric acid. But Miescher has also demonstrated the presence of another phosphorized substance in the nuclei of pus corpuscles, to which he has assigned the name *nuclein*; and he surmises that this body, on account of its phosphorous, plays an important part in cell-growth and in the genesis of the cell albuminoids and their derivatives. Nuclein closely resembles mucin, but is richer in phosphorous, and it appears to exist performed in the corpuscles.

With reference to the questions of the origin of pus corpuscles, their identity with the white blood globules and lymph corpuscles, and their ultimate fate, Hoppe-Seyler's results are remarkably interesting. Since living white blood corpuscles cannot be obtained from the blood in quantity sufficient for chemical analysis, and the spleen, although furnishing them abundantly, contains cerebrin and glycogen (both of which it is necessary to exclude), a novel expedient was adopted. Fresh crystalline lenses from the ox were introduced into the abdominal cavity of dogs, and, as was expected, the lenses became infiltrated with lymph corpuscles. The presence of glycogen was proved most clearly in the lenses at the period corresponding to the greatest number of active lymph cells; hence the conclusion that the glycogen comes from these. If, however, the lenses were allowed to stand still the corpuscles became rigid, sugar was found, but no glycogen. Since no glycogen was detected in the pus from inflammatory abscesses and wounds, its occurrence is a means of distinguishing lymph cells from pus corpuscles, although these have their origin in the former.

Canada Medical Journal.

MONTREAL, FEBRUARY, 1872.

SANITARY REFORM.

In the last number of this journal, we spoke of the contagious character of certain diseases, such as Small-pox, Scarlet Fever, Measles, Whooping-cough and Cholera. We alluded, moreover, to their being eminently preventible, by the adoption of certain precautionary measures, to which we propose to allude in this present issue of our periodical.

It has been computed that Jenner's great discovery, saves from death by Small-pox each year, in the British Isles, 80,000 lives, but there is not a country in Europe in which the beneficial result of vaccination has not been fully tested and proved. In Marseilles, in 1828, Small-pox was epidemic. The Academy of Medicine, Paris, took special care to collect the statistics of that epidemic. It was found that 8,000 persons in the city were unprotected by vaccination or a previous attack of Small-pox. Of these 4,000 or one-half, took the disease and many of them died; on the other hand, 30,000 persons in the city had been vaccinated, or were otherwise protected, and of these, 2,000 took Small-pox, and some of these cases were of a severe type.

We merely mention this case, more to place it on record, than to add any material weight to the already overwhelming evidence which is obtainable on this point. The assumption that vaccination is actually and in reality a preventive to the disease Small-pox is incorrect. In a great number of cases it proves a protective power which is at once striking and unmistakable, but that it is absolutely in every case a protection against the disease Small-pox, experience has proved to be untrue. This, however, is no reason against the employment of vaccination.

Vaccination has been shown to be one of the most efficient means at our disposal, for the prevention of the spread of Small-pox. But there are other means which experience has proved to be equally efficient, perhaps of greater efficiency.

These in the main consist in isolation, strict seclusion, surrounding the sick with nurses and attendants who are themselves in-

capable of being affected, inasmuch as they are known to be protected against the disease; and the early purification by disinfectants, and frequent ablution of the patient, his clothing, bedding, and the apartments he has occupied.

When the cattle disease spread from Europe to England, in 1867-68, it was found to be a highly contagious malady, so much so that an infected animal would communicate the disease to a whole herd. The most efficient means for the arrest of the disease consisted in the destruction of the diseased animal, and sometimes of all those that had been exposed to the contagion. This of course was an expensive but most efficient method of treatment, and in due course of time the Rinderpest, as it was termed, disappeared. But inasmuch as the Lycurgan laws do not at present exist, this method of stamping out contagious diseases is not applicable to the genus homo. There are however measures quite as effectual as the pole-axe, which if faithfully carried out, would without doubt arrest the spread of contagious disease.

We observe that the Editor of the *Canadian Illustrated News* in alluding to the articles which have already appeared in our journal on the subject of "Sanitary Reform," propounds the novel doctrine that vice and ignorance give rise to contagious maladies. If this be the case, it is greatly to be wondered at that these diseases are so prevalent among the virtuous and educated. Experience certainly bears out the proposition of Sir J. Y. Simpson, that contagious diseases never spring up *de novo*, but that they are always due to contagion or infection in some form. The Editor asks: "Whence then the small-pox? Does Sir James mean to teach us that it was created, like the dog or the hawthorn, and must of necessity be propagated by its seed?" Most certainly. Small-pox is due to a specific poison, but requires an appropriate soil for its development. We have it in the sacred volume that the Almighty permitted Satan to try the patience of Job, and he did so by afflicting him with boils and other sores. We may therefore infer that small-pox was an invention of the devil, with as much logical precision, as that it was created like the dog or the hawthorn.

The Editor of the *Illustrated News* mistakes our meaning when he says: "Such hospitals under the charge of a Board of Health with powers that would be very likely claimed for it, might be made the agency for much domestic agony by separating those who from family ties and personal feeling would rather be together in sickness as in health, and even unto death." We never would recommend extreme measures of this character, but if persons assume the responsibility of the care of friends under such con-

ditions, they should be obliged to comply with the most strict measures of isolation and segregation.

We know of families in this city, and during this present epidemic of small-pox, who systematically sent their children to public schools, even while the disease small-pox was in their houses. And we could trace if necessary the propagation of measles and scarlet fever from the same want of forethought and common sense. Such is the experience we doubt not of every medical man.

It would appear that these measures cannot be forced on the people except by Act of Parliament. Man is so stupidly doltish, that recommendations for the preservation of his health, comfort, or his very life will be by him neglected, or altogether ignored, unless they come with the authority of law, with certain pains and penalties attached for their neglect.

Sanitary laws are based on actual observation and experience. It is well for any people if they profit by the experience of others. But the enforcing of sanitary regulations on the ignorant, becomes the duty of the Government of a country. In the case of Canada, the Government being without advice on this all important subject, cannot be expected to follow the suggestions of Local Boards of Health, or of every writer (however earnest), who takes up this subject in the interest of the whole community.

What we would again urge, is the calling together of a General Board of Health for the Dominion, not alone to counsel the Government, but to prepare an efficient and comprehensive bill to be submitted to the Commons of Canada during the coming Session. If this is not done, or if measures are not entered into with a view of arousing the people from the state of lethargy which exists, we cannot tell what amount of sickness and death are before us, and it will then be too late to set to work to remedy the evil while a state of panic exists. We observe that other countries are, as it were, setting their house in order, with a view of averting the threatened approach of pestilence, or at least of being fully prepared for its invasion. But in Canada we have not taken the first step. We are crying out "Peace, peace, where there is no peace." It is a subject unpalatable, and therefore ignored or wholly neglected—but it is not the wisest course to pursue, and we earnestly pray that our fears may prove without foundation.

THE MEDICAL OFFICERS OF HEALTH OF MONTREAL AND
THEIR CIRCULAR.

Montreal,.....187

To DRs. DUGDALE AND LAROCQUE,
Medical Officers of Health,
City Hall.

I report the following cases of Small-pox :

No.	Street,	Ward.
(Signature,)		

M.D.

We received the above printed document, purporting to emanate from the Medical Officers of Health for the City of Montreal, and we were inclined to regard it at first with favour, until we read an effusion which appeared in the *Montreal Gazette* of the 5th February instant, headed "The Medical Society's Opinion."

We copy the article *in extenso*, as it is too rich to bear any cutting down:—

"Drs Larocque and Ricard having been named by the Medical Society of this city to examine an article in the *Medical Record* of New York, which treats of certain measures adopted by the New York Board of Health, for the prevention of the spread of contagious diseases, such as scarlatina, small-pox, etc., and to report, and also having received instructions to confer with the Board of Health, and recommend the adoption of similar precautions by this city, prepared their Report, submitted it to the Medical Society on Wednesday last, and on Thursday to the Board of Health. The following recommendations were made:—

First, that every Doctor in the city shall be bound to report to the Board of Health every case of contagious disease under his care; second, that every person keeping a lodging house or hotel, or the relations and parents of persons thus affected, shall be bound in like manner. On receipt of such information the Health Officers shall go to the place, and decide whether the sick persons (of their own free will) shall be taken to the hospital. If the patient goes to the hospital, a sanitary policeman shall be charged with seeing that the house, and the effects that were used about the sick room, are disinfected. If he stay at the house the sanitary policeman shall ascertain two or three times a week whether the sanitary measures ordered at his visits are carried out. So soon, too, as the patient leaves his room, they must proceed to disinfect it. If the infectious disease be small-pox the vaccinator of that district should be notified in order that he may proceed to re-vaccinate the whole family, as well as the residents in each of the neighbouring houses, and if necessary those who live across the way.

The following rules to be observed in cases of small-pox, measles and scarlet fever, should be in the hands of all those who have sick people in their hands.

That the Doctor, the nurse and the mother of the patient should be the only persons permitted to enter the sick room, or to touch the clothes used by the patient, unless they should have been disinfected.

Second, that all those who do not wait upon the patient should be kept away from his room; and no use should be made of his clothes until they have been soaked for at least one hour in a preparation composed of three ounces of sulphate of zinc, one ounce of carbolic acid, and three gallons of water, and afterwards washed in boiling water. The feather bed, and all other bedding should be submitted to a complete fumigation before being used. The chamber vessel should constantly retain a disinfecting fluid, and be washed with boiling water whenever used. The closet, or *latrines*, should be daily disinfected, by throwing in chloride of lime, in the proportion of one pound to a gallon of water, besides a couple of ounces of carbolic acid. In lieu of handkerchiefs it is recommended that piece of cotton be used, to be burned as soon as done with.

So soon as the patient leaves his chamber, the ceilings, the walls, and wood-work, should be thoroughly washed with hot water and soap.

They also recommeend that energetic measures shall be taken to vaccinate all those who have not yet been vaccinated, and those in whom first vaccination has been doubtful, and following the practice of the New York Board of Health, to use only the lymph taken from the arms of absolutely healthy children—putting aside that which has been gathered seventy-two hours. They also recommend that a circular should be issued through the churches, informing parents of children that they are bound by law to have their children vaccinated within three months after birth; also that if any contagious disease, such as small-pox, measles, scarlet fever, or typhoid fever, breaks out in a family, they themselves are bound to give notice of the fact to the Board of Health, within twenty-four hours after the disease appears. In fatal cases the family should obtain a certificate of death from the family physician; and if he be absent or if they have not employed a doctor, from some doctor of the city.

We can assure our readers that the Medico Chirurgical Society of Montreal, which is composed of all the leading practitioners of our city, is not the Society here alluded to, nor have these sapient suggestions so far as we can ascertain, been submitted to that body.

We may be in error, or perhaps we look on this subject in a different light to the promoters of the suggestions above, but certainly they savour of an amount of ignorance and impertinence which is seldom met with.

Are the Health Officers in earnest when they request their fellow practitioners to report to them any cases of small-pox or other contagious disease, in order that they the Health Officers, may

be in a position to repair to the house of the patient, and decide the very knotty question of the fitness of the patient for removal to hospital. Is not every practitioner quite as capable of deciding this question as either of the Health Officers, or both of them together. But if the patient complies, his friends are then to be pestered by a sanitary policeman, who will issue his orders with the same amount of *sang froid*, as he orders householders to cut the ice from before their door steps, with the threatened alternative of being summoned before Mr. Recorder, and fined in case of non-compliance.

We need hardly allude to the other suggestions concerning disinfectants; no two minds agree as a general rule, and we see no good reason why a formula need be prescribed by the Health Officers. Certainly if we required a disinfectant, we could select from the numerous remedies of that class some few which would be equally good and perhaps better, than a mixture of sulphate of zinc and carbolic acid in water.

The recommendation to substitute a piece of cotton for pocket handkerchiefs is particularly good, but we would pity our patient's nasal appendage.

The concluding suggestion is a matter of very great importance. In fatal cases a certificate from a medical man, setting forth the cause of death should be always obtained; perhaps the Health Officers are unaware that a bye-law exists in the city code, compelling the keepers of all cemeteries to refuse burial without a medical certificate of death, or a Coroner's order. We fear the suggestions of our city Health Officers will fall through; certainly in their present form they will not be complied with by the profession generally, nor has the Corporation the power of enforcing them.

DRUGGISTS PRACTISING AS PHYSICIANS AND SURGEONS.

We beg leave to call the attention of the authorities of the College of Physicians and Surgeons to the following advertisement:—

V A C C I N A T I O N .

Those who have not been vaccinated, and wish to be, for 25 cents, with the purest and best Vaccine, had better call round at, JOHN BIRKS', CHEMIST AND DRUGGIST, 583 ST. CATHERINE STREET, where upwards of 400 have been done during the last two weeks with perfect satisfaction.

Don't fail to call at once.

If the law under which the profession is governed has become obsolete, whose is the fault? The College has a purse in which

several hundred pounds are to be found. We should imagine that a legitimate way of spending at least the interest of that money, would be in prosecuting all offenders. We are cognizant of the fact that several Druggists in this city, are constantly in the habit of prescribing over the counter, some go so far as to perform minor surgical operations; and others visit patients, and charge for their visits. These men, all of them, have set the College at defiance, in refusing to take out their license as druggists. Seeing they can act as they please without being interfered with in this particular, they next proceed to style themselves doctor, and assume the rights and privileges of that class, feeling convinced that the "old fogies" of the College cannot in any way molest them.

If the penal clause of the act incorporating the profession is inoperative, why allow it to remain so? Have it amended, and let us be in a position to change the present unsatisfactory state of things.

THE CANADA MEDICAL JOURNAL.

We have received a letter from a contributor, on the subject of the objects of our Journal, and who compares our Journal, unjustly we think, with the London *Lancet* and other medical periodicals, published every week in England.

In publishing the CANADA MEDICAL JOURNAL we were induced to do so to give to the profession in Canada, a means of making known their observations in the treatment of disease. No person can conceive the amount of labour connected with a publication of this character. Single handed we have laboured unremunerated, except in feeling that we have done some little good; and we will continue to labour—although the profession has not sustained our work, yet we hope that in time our confreres will be induced to earnestly aid us, by recording cases which may come under their observation. This would benefit themselves as well as the profession they have selected. It is no wise man's policy to hide his light beneath a bushel. It is the character of a churl, or of an indolent man, to allow important observations to go unrecorded.

What would be the present position of Medicine and Surgery, if earnest and painstaking observations had never been placed on record.

We cannot but feel that Canada has not taken that stand in scientific observation which she ought to hold. The Medical and Surgical profession is as well administered here as in other coun-

tries, and yet, with very few exceptions, there has been very little done, that can be pointed to with honest pride as being the work of a Canadian. We have felt on more than one occasion that our labour was one of supererrogation, and we have more than once been on the eve of relinquishing the task of publication, for we have felt that our journal was not appreciated, nor was it a welcome guest. If, however, our subscribers would become our contributors then indeed would much good result, and the CANADA MEDICAL JOURNAL would have fulfilled its mission.

Medical News.

THE USE OF SECONDARY LYMPH.

The *British Medical Journal* says: Our Manchester correspondent writes that the extent to which re-vaccination has been practised in Manchester during the last few months, has afforded rare opportunities for deciding some questions which were before held by some to be still *sub judice*; for example, the custom which has prevailed among the mill owners of having all their work people vaccinated, has settled the question of the value of secondary lymph as compared with virgin lymph. Out of many similar experiences, the following may be quoted by way of illustration. A fortnight ago a surgeon vaccinated 300 operatives; in 150 of these cases he employed virgin lymph; in the remaining 150, secondary lymph was used. The first series gave the following results; 19 cases were unsuccessful; in 16 cases, small papules and spurious vesicles resulted, while the remaining 115 showed well-marked primary vesicles. The second series gave very different results; for out of them 50 were entirely unsuccessful, 86 terminated in papules and small spurious vesicles, and only 14 yielded true primary vesicles.

A WEST OF ENGLAND CIRCULAR.

Roger Giles. Sur John Parish Clark, & skulemaster reforms ladys and gentlemen that he drass teeth withowe waitin a moment, blisters on the lowest tarms and viziks vor a penny a pease. He Zells Godfathers Cordel, kutz korns and hundertakes to keep hevery bodys nayles by the year or so on, Young ladies and gentlemen larned there grammer language in the purtiest manner, alzo gurt kare taken off there morals and spellin, alzo Zarm Zinging teechin the bais vial and all sorts of phancy Work, Queerdrills, pokers, Weazils and all other contrary dances tort at

hoam and abroad at perfekshun. Perfumery and snuff in all its branches, As times be cruel bad He begs to tell that he has just begun to sell all sorts of Stashuary wares, Kox, Hens, foles, cheese, Poltry, blackin bauls, herrins & coles skrubbin brushes, trakel, Godley bokes & Bibles, Gimblets, micetraps, brick dust, & whisker seed, and hall sorts of sweatmeats, inkludin taters, sassage, and other gardin stuff, also phrute, hats, Zongs, hoyle, lattin bukets, and other eatables. Korn & bun yard zarve, and all hardwares, He also performs fleabotomy on the shortest notice and further more in partikular he has laid in a large assortment of trype, dog's meet, lollipops and other pikels,—such as Hepsom Zalts, hoysters, windzer Zoap &c, old rags bort & sold heare & nowhereshelse new laid heggs hevery day by me Roger Giles.

Half Holiday.—

AMERICAN MEDICAL ASSOCIATION.

The Twenty third Annual Session will be held in Philadelphia, Pa., May 7, 1872, at 11 A.M.

The following Committees are exprocted to report:—On Cultivation of the Cinchona Tree. Dr. Lemuel J. Deal, Pennsylvania, chairman; On the Anatomy and Diseases of the Retina. Dr. R. F. Michel, Alabama, chairman; On the Comparative Pathology and the Effects which Diseases of Inferior Animals have upon the Human System. Dr. George Sutton, Indiana, chairman; On the Structure of the White Blood Corpuscles. Dr. J. G. Richardson, Pa., chairman; On Vaccination. Dr. T. N. Wise, Kentucky, chairman; On Skin Transplantation. Dr. J. Ford Thompson, D.C., chairman; On the Nature and Process of the Restoration of Bone. Dr. A. L. McArthur, Illinois, chairman; On some Diseases peculiar to Colorado. Dr. John Elsner, Colorado, chairman; On Correspondence with State Medical Societies. Dr. N. S. Davis, Illinois, chairman; On National Health Council. Dr. Thomas M. Logan, California, chairman; On Nomenclature of Diseases. Dr. Francis Gurney Smith, Pa., chairman; On What, if any, Legislative means are expedient and advisable, to prevent the spread of Contagious Diseases. Dr. M. H. Henry, New York, chairman; On American Medical Necrology. Dr. J. D. Jackson, Kentucky, chairman; On Medical Education. Dr. J. S. Weatherly, Alabama, chairman; On Medical Literature. Dr. Theoph. Parvin, Indiana, chairman; On Prize Essays. Dr. Alfred Stillé, Pa., chairman; On the Climatology and Epidemics of—New Hampshire, Dr. G. R. Crosby; Vermont, Dr. G. B. Bullard; Massachusetts, Dr. E. Cutter; Rhode Island, Dr. Edward T. Caswell; Connecticut, Dr. J. C. Jackson; New York, Dr. W. F. Thoms; New Jersey, Dr. E. M. Hunt; Pennsylv

vania, Dr. W. L. Wells; Maryland, Dr. C. H. Ohr; Georgia, Dr. A. J. Semmes; Missouri, Dr. W. S. Edgar; Alabama, Dr. R. F. Michel; Texas, Dr. S. M. Welsh; Illinois, Dr. David Prince; Indiana, Dr. Dugan Clark; District of Columbia, Dr. J. W. H. Lovejoy; Iowa, Dr. J. Williamson; Michigan, Dr. S. H. Douglas; Ohio, Dr. J. A. Murphy; California, Dr. F. W. Hatch; Tennessee, Dr. W. K. Bowling; West Virginia, Dr. E. A. Hildreth; Minnesota; Dr. Charles N. Hewitt; Virginia, Dr. A. G. Wortham; Delaware, Dr. L. B. Bush; Kansas, Dr. Tiffin Sinks, Mississippi, Dr. J. P. Moore; Louisiana, Dr. S. M. Bemiss; Wisconsin, Dr. J. K. Bartlett; Kentucky, Dr. L. P. Yandell, senr.; Colorado, Dr. R. G. Buckingham; Oregon, Dr. E. R. Fiske; North Carolina, Dr. J. F. Haywood; South Carolina, Dr. M. Simmons.

Physicians desiring to present papers before the Association should observe the following rule:—

“Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the secretary to whom such papers are sent, to examine them with care, and, with the advice of the chairman of his section, to determine the time and order of their presentation, and give due notice of the same.”

OFFICERS OF SECTIONS.—Chemistry and Materia Medica—Drs. R. E. Rogers, Philadelphia, Pa., chairman, Ephroim Cutter, Boston, Mass., secretary; Practice of Medicine and Obstetrics—Drs. D. A. O'Donnell, Baltimore, Md., chairman, Benjamin F. Dawson, New York, N.Y., secretary; Surgery and Anatomy—Dr. John T. Hodgen, St. Louis, Mo., chairman, W. F. Peck, Davenport, Iowa, secretary; Medical Jurisprudence, Hygiene, and Physiology—Drs. S. C. Busey, Washington, D.C., chairman, E. L. Howard, Baltimore, Md., secretary; Psychology—Dr. Isaac Ray, Philadelphia, Pa., chairman, John Curwen, Harrisburg, Pa., secretary.

Secretaries of all medical organizations are requested to forward lists of their Delegates, as soon as elected, to the Permanent Secretary.

Railroad and Hotel arrangements will be announced at an early date.

W. B. ATKINSON, M.D.,

Permanent Secretary.

1,400 Pine Street, S.W., corner of Broad,

Philadelphia.