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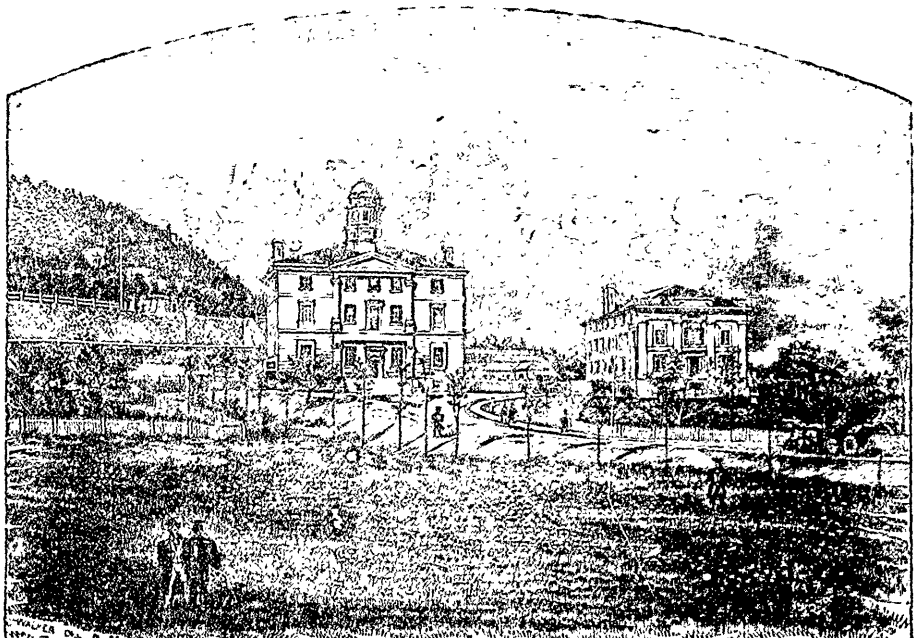

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ORIGINAL COMMUNICATIONS.

ART. III.—*Clinical Selections*, by WM. WRIGHT, M.D., L.R.C.S.E., Professor of Materia Medica, McGill College, Physician to the Montreal General Hospital, &c.

VI. *Amputation of the shoulder joint for Osteocephaloma simulating Aneurism.*

The origin and progress of malignant affections often continue to be matters of obscurity after the leading features connected with their known history have been disclosed. These lesions frequently are found succeeding an injury of a part, at other times no local cause is appreciable, while in a third class, as in the case subjoined, some uncertainty may prevail as to the real bearing which alleged provocation may have had upon the production of the specific disease, from having been frequently renewed, often before and occasionally after the obvious establishment of the latter condition, leaving the examiner much perplexed in his attempts to fix upon the positive date of its development. Nor is the endeavor, to establish a relative dependency between the constitutional taint and the topical disease, always more successful; experience shows that either may precede the other, the latter may seem to be a partial concentration of the former, or the former may equally look like the general diffusion of the latter, or instead of these simple evolutions, the formation may be more intricate as may now be learned. A man in ruddy health meets with an accident, the limb becomes the seat of similar oft repeated misfortunes, these through suffering and confinement imply

systemic debility, injuries again follow, evidences of specific local disease at length unmistakeably appear, and then the constitutional infection prominently manifests itself.

History.—In October 1853, Mr. Angus S. McDonald, of Cornwall, received a fracture of the left os humeri: at the time he was acting in his capacity as a bailiff, and was resisted, he was violently knocked *down* by a blow upon the cheek, and while rising, was either hit or kicked upon his arm, but is not certain which, as the injury was inflicted during a dark night. A practitioner was immediately called in, but before his arrival a considerable degree of swelling had supervened, he *delayed* putting up the limb in splints till next afternoon, ordering merely the application of cold water; the bone was believed to have been broken about 4 inches above the elbow. The first adjustment became imperfect from the subsidence of the enlargement, and in a few days after, it was necessary to put up the limb a second time, it was now left with the splints undisturbed for 5 or 6 weeks, the only interference made by the Dr. at his occasional visits being a slight tightening of the bandage if found loose, at the end of this period the appliances were removed; the arm upon exposure appeared crooked, and presented a *slight* convexity along its outside. It was large about the fractured vicinity from unabsorbed callus, and rather powerless, but free from pain.

Since then he has met with many more accidents, and in all, the weak part has chiefly, if not wholly, suffered.—Two of these he can particularly recall to mind. During the ensuing winter (about February) in one day he was twice thrown out of a cutter, and each time fell upon the arm: the consequences were so severe as to lay him up for several weeks; the bone was suspected to have been broken, and the limb, from the wrist upwards, became much swollen and discoloured like an extensive ecchymosis, *these* slowly disappeared and were succeeded by a rheumatic sensation of a chronic character. In the following fall he fell upon the ice and struck the elbow; it continued sore for a long time afterwards. He found, subsequently, that any sudden jar or disturbance of the arm, as from a false step, would re-induce the uneasiness for hours together. Exertion, even though slight, also produced more or less distress, but there was no pain without provocation.

In March, 1856, a decided change for the worse occurred. He then felt great pain all through the arm, originating about the *centre and extending* up and down to the shoulder and elbow; he remembers it as being "heavy and dead," "hot and beating," steady," but never lancinating; though constant, it was always worse at night, and he refers the difference to the diversion of his mind through the day by its amuse-

ments or passing circumstances. He has never since passed a day of exemption from suffering. Latterly he thought it getting worse, especially along the outside of the arm.

Simultaneously, or nearly so, with the development of the pain, the present tumor exposed itself. It began "on the top" or front of the arm; when first particularly noticed it was about 2 or 2¼ inches square, diffused, and not very prominent. It enlarged gradually till last fall, since when it has grown so quickly as to have become now as large again as it was before: it amplified by extension of its borders, rather than by elevation of its surface. The augmentation seems to him to have been principally upwards, along the front aspect of the arm. "Under the arm" (inner surface) he found it did not grow much. It was always rather hard, he could only press it freely along the inner surface, in any other part he could scarcely bear to touch it. The surrounding skin was not reddened nor discolored: did not observe any developement of veins except one large cross vein which, he thinks, he never perceived before the time of the primary fracture.

Has noticed "a thrill" along the inner part ever since the fall from the cutter; as the swelling became greater he thinks this perception grew more evident.

His system is giving way before the advance of the local disease: from the establishment of the latter he discerns a remarkable alteration in his face, it was previously full and florid, but subsequently it faded and got to be thin as well as pale; he also became care-worn, appetite faltered, and sleep broken. Within the last half year he experienced frequent epistaxis which he never had before; it happened usually every 2 or 3 days, and was seldom absent beyond a week's delay; sometimes, though rarely, has had two distinct hæmorrhages during the same day. On each occasion the amount of blood lost averaged about a wine-glass full, —it was commonly thin and dark. Never has had bleeding from any other source. For the past two or three years he has been subject to profuse sweatings at night, which he says were not preceded by rigors. During the greater portion of this period he has been annoyed by a cough; it is usually dry, but latterly has been attended with a scanty expectoration of phlegm, he thinks it is partly kept up by the dorsal decubitus, to which he is confined, while in bed, by his arm. Has been subject to catarrh from boyhoood, particularly at spring-time.

Had a cousin (father's side) who died of cancer of the cheek, but knows of no other relation who had any malignant disease. His mother died of phthisis, but no other member of his own family has been visited by it.

He had been seen by different medical men in Cornwall and its vicinity, and recently had consulted my old and excellent friend, Dr. Bergin of the former town, who very considerately advised him—in view of the desperate character of the disease—to get further council before submitting to an operation. Accordingly he came down to Montreal, consulted me, and entered the General Hospital.

Present Condition, 4th May, 1858.—The left arm exhibits a tumor of an oblong form, which measures circumferentially at its superior part 17¾ inches, nearly the same at its middle, and 14 inches inferiorly, its length anteriorly is 11 inches. It is not circumscribed or isolated, but appears as an involvement of the entire thickness of the limb; it occupies the greater portion of the extremity, encroaching close upon the shoulder and ending just above the elbow, it rises rather abruptly, but terminates in a more tapering manner; the surface is for the most part smooth and uniform, though about ⅓ds of the tumor are separate from the rest by a slight intervallation, and there appears in some parts a tendency to a few small tuberos inequalities. It feels decidedly firm and consistent, and is not yielding nor elastic upon pressure, does not distinctly recede before compression,—the inner surface is more moveable than the rest,—it conveys to the touch, particularly upon the front and outer aspects, the idea of a fibro-cartilaginous growth. No crackling sensation elicited. Palpation increases pain; feelings are those already described. There is no discoloration of the investing skin, no remarkable developement of cutaneous veins, but those seen are very turgid. A peculiar thrill is perceptible over the course of the brachial artery,—the vibratory succussions communicated convey the notion of a lumber of fine shot being rapidly whirled along under the fingers,—it extends also across a breadth of an inch or more, for some extent in the central portion of the arm. A very decided Bruit de soufflet is audible over the artery, and also from different parts of the tumor, most intense in proportion to the propinquity of the main artery: pulsation is heard throughout the tumor, it is a deep heavy beat, and apparently transmitted, not spontaneous, it is sufficiently strong to be denoted by a sensible elevation of the stethescope, even when the outside is explored. Compression of the subclavian artery, of course, annuls all these vascular signs: it is not, however, attended with any discoverable decadence in the volume of the tumor. The hands made to grasp the growth appear to feel a pseudo-expansion during the occurrence of the pulse. Radial pulse of the diseased side weaker and more obscure than the sound side. A functional bruit is generally evident especially over the heart (Aortic Systotic) along the right subclavian, &c. The individual has an anæmic appearance

which, with the other general symptoms, has been already described under history.

It will be observed that the symptoms partook of those of Aneurism and of tumor of the bone, so that in a broad way the diagnosis lay between them. Practically, the decision was of little importance, for a similar treatment was applicable in both. Amputation at the shoulder joint being certainly the only resource in the case of such an extensive tumor as the present; and in the eyes of many, a more judicious expedient than deligation of the subclavian artery, had it proved to be an immense Aneurism. The sources of fallacy were striking and important. The considerations which leaned to the side of Aneurism were the fact of previous fracture,—the presumption of a wounded artery from the huge ecchymosis of ancient date,—the presence of tangible thrill since the time of this occurrence,—with this, the additional signs of bruit, pulsation, &c. Without, however, having become acquainted with these minutes of the history, and judging simply from rapid sight and casual touch, the primary impression formed was that the disease was a tumor, probably an osteocephaloma. But a more lengthened review of the merits of the case led to a confirmation of the opinion in favor of Aneurism, for the firmness of the mass and the condition of its surface—the ostensible opponents to this view—were both explainable upon the supposition that the fracture had been badly set, the bone grown together again in an incurvated fashion with the convexity of the curve directed ontwardly, producing a kind of bed in which the sac rested. The union of the bone in this round way would also account for the extensiveness of the hard covering, as the enlargement would provoke an increase in the deposition of provisional callus, and a spreading out of this material to strengthen the bone in a position naturally weak. The same interpretation would also serve to render some other obscure features intelligible, such as the undecided manner of the expansion of the tumor, the doubtful quality of the pulsation, &c. The peculiar thrill —so well sustained and invariable,—and the manifest bruit over the course of the artery, and even to some extent off its track, tended yet further to assure the mind of the observer that the brachial artery was in an Aneurismatic state. The probability, however, was that with this some tumor of the bone also existed. For the size to which it had attained, —the unabating suffering it had given rise to,—the fulness of the veins —the unfavorable change to an unhealthy whitening and withering of the face,—the concurrent experience of a deliterious influence preying upon the general health furnished by epistaxis, night-sweats and other serious symptoms, inclined to the well-founded belief that the disease

was not simply an abnormality in the physical condition of a part of the vascular apparatus, but, on the contrary, an independent growth or formation of a suspicious character. The natural force of these reasonings received material support from the adjuvant considerations which have previously engaged us, but to preserve the investigation as simple as practicable, these need not here be re-entered upon. And this is another testimony to the necessity for general investigation on "the classical method," for to confine the attention to the local signs, it were extremely difficult, if not impossible, to escape the belief that the case was merely an Aneurism.

I believe the local evidence was of as strong a character as that which has been the source of deception in other examples, with perhaps this difference, that in them it was not so fully, if at all corrected, by the collateral testimony afforded by other parts; here a knowledge of the history chiefly unveiled some of the mystery,—but in them this intelligible assistant sent forth no available teachings,—nothing could be derived from it that aided in dispelling the obscurity which through similitude or imitation the notable signs of the part evinced. Mr. Stanley, Medico-Chirurgical Transactions, Vol. 28, has an interesting article upon the subject of "pulsating tumor of bone," in which he observes "it is certain that there have been instances of the tumor of bone, the pulsations of which were in every particular identical with those of Aneurism." Again the same gentleman, in his treatise on the diseases of bone, in reference to the same subject says, "the character of pulsations has been in many instances so perfectly identical with the pulsation of Aneurism that the most experienced surgeons have been deceived by it." But it is not pulsation alone is deceptive; he also alludes to the apparent perfectness in the results which followed in these cases from compression of the artery on the cardiac and distal sides with those of Aneurism, and to the fact that even direct compression of the tumor caused a partial emptying, and slowly remitting the pressure, the sense to the fingers of a rush of blood into the tumor. In a case he details the strongly marked bellows sound of Aneurism; and in one by Mr. Guthrie "the whizzing sound, attendant on the flow of blood into an Aneurism, could be very distinctly heard." Individual cases may, furthermore, be encountered, presenting peculiarities in their own features; in some there may be either a slight thrill or vibration through portions of the tumor, while in others there may be the deep heavy pulsation of Aneurism in every part of it. Seeing then how highly probable a mistake in diagnosis may be in certain cases, we are prepared to expect it may lead to inconsistent details in practice Indeed several authentic cases are on record where these apprehensions were fulfilled

As that by Mr. Guthrie, (London Medical and Surgical Journal, 1834,) where a tumor about as large as an adult's head, situated upon the right nates of a female, presented so decidedly the characters of Aneurism that it was believed to be so by Sir Astley Cooper, M. Guthrie and other experienced surgeons who were consulted upon the case, and accordingly a ligature was placed around the common iliac artery; on examination the tumor was found to be composed of cerebriform substance; the arteries were healthy. A second (Med. Chir. Trans, vol. 28,) where Mr. Luke, of the London Hospital, tied the femoral artery in mistake. Another by Mr. Earle of St. Bartholmews, London, where this eminent surgeon tied the left subclavian artery under the persuasion that an Aneurism existed when no such lesion was present. and Mr. Stanley, in a case of pulsating tumor of the Ilium, likewise threw a ligature around the common iliac artery. In these examples had amputation been practicable, it would have formed a proper treatment, even had the reason, for which it had been undertaken, no existence; yet being the proper expedient in tumor, the other alternative, the actual or revealed condition would have justified the practice. In either state it was proper, and, whatever the diagnosis arrived at, its merits would have remained uninvalidated. These marks are substantiated by reflection upon the case now reported.

On the 5th May, a consultation met of the Medical Staff of the Hospital, at which Dr. Bergin of Cornwall was present, whose continued sympathy—deep and disinterested—induced him to leave his own city to be present at the operation, and extend to the poor patient those exhibitions of true charity which "set at liberty them that are bruised." It was decided that I should perform amputation of the shoulder joint.

Operation,—Performed between Noon and 1 P. M. of the same day. After the successful administration of Chloroform, the patient being placed in a convenient situation, the left subclavian artery effectively compressed with a large key, and the left arm held at a right angle fromthe body, the circular operation was commenced. With the performance of the annular division of the integument, in the first sweep of the knife, a gush of blood issued and was unusually copious and impetuous, its color was not arterial but mixed, chiefly, venous; fearing that a sac had been opened communicating with an important vessel, a towel was strongly bound round the arm at the top of the tumor below the mark of the knife, and put a stop to further bleeding. The integument was then separated, turned over and dissected back to a sufficient extent. The knife was next inclined so as to pass under the acromion and up over the head of the humerus, dividing the deltoid muscle and capsular ligament, and open.

ing into the joint; it was now passed over the surface of the glenoid cavity of the scapula, and, with a downward force still applied, severed the remaining ties which bound the extremity to the trunk, among the last of which, that were cut, was the axillary artery. The wound being sponged, a search was made for such arteries as required tieing; four ligatures were applied. There being afterwards no significant bleeding, the reflected integument was reponed, and the rounded aperture converted into a vertical linear wound, which shape it was made to retain by a few stitches, and the usual other retentive means of plaster and compress. Lastly, a modified figure of 8 roller covered all in. A powerful shock was sustained by the patient's system, so much so, that it was not considered advisable to take him off the table of the operating theatre till the expiration of about two hours afterwards. There he was kept, at perfect rest in the horizontal position; and from the general prostration —great weakness of the circulation and reduction of animal heat,— draughts of wine and brandy were given: the hot pan was also applied to the chest and abdomen. He gradually rallied and no undue reaction supervened.

Evening report was that no bleeding beyond a slight oozing had transuded, the patient felt comparatively comfortable, and was doing as well as could be expected.

The circular operation was adopted from necessity, for there was not sufficient room, owing to the high encroachment upwards of the tumor, to permit of the performance of the flap method. Without entering upon the comparative superiority of these two plans, it may be observed, that, even had there been room for an election, the recommendations on the part of the circular are so great, that its claims deserve the most favorable entertainment in every case before a decision be concluded for or against its execution. One advantage, perhaps not sufficiently recognised, inculcated by the present case, is, that the compression of the artery may be safely delayed until the last step of the amputation, when the knife is crossing the articular surface and cutting through the soft axillary attachments of the shoulder, as until then the vessel is not endangered. No necessity certainly exists for compression during the division and reflection of the integuments; but on the contrary, exerting it then, may not only be superfluous, but objectionable, by promoting venous hæmorrhage, or increasing the amount of this flow. This result is inevitable, for the compression, unavoidably involving the subclavian vein, causes an extreme fullness of all the formative branches of this trunk which ramify in the arm, placing them in the analagous condition to that which they present after the application of the bandage in ordinary

venæsection. The rush of blood that escaped upon the first sweep of the knife may partly be explained in this way: it was ,however, so much more abundant than common, that it must principally be referred to an unusually capacious or developed state of the vascular system of the part. The first idea which it suggested was not countenanced by subsequent discoveries, for no sac existed, nor was the artery diseased or degenerated. Supposing, however, the case had turned out to be one of pure aneurism, amputation would still have been preferable to deligation of the subclavian arteries, for many reasons. The risk to life would have been less. The mortality after ligature of this vessel in the third part of its course—the portion to be chosen,—is, in round numbers, 1 in 2, after amputation 1 in 3. The danger is not altogether to the artery being tied, for this happens in both operations, but to the exemption of amputation—of ligating in a flap—from many of the perils which follow the special cutting down upon the artery as wound of the pleura, &c.; as well as from others that depend upon the continued connexion of the limb to the trunk, as erysipelas or gangrene. Another positive benefit afforded, by amputation is, the patient is a gainer of a large share of blood, which was formerly detracted from the wants of more healthy parts to supply the morbid craving of the diseased limb. He has not so much surface nor so many somatic atoms to furnish with nutriment. The little blood he has, will now go further and do more than it did before, and, in a case like the above, the importance of such an advantage is very obvious. Furthermore, the great recommendation—saving the limb—in favour of the ligature, would have been, on the most favorable supposition, a doubtful reality; for, had the arm united crookedly, had the external hardness been a subcutaneous deformity of the mis-placed broken ends, of what use would have been the preservation of such a member? even the possibility of the sac undergoing the necessary changes of resolution, if fully carried out, would have availed nothing. Had, lastly, it may be urged, the case been one of aneurism, the state of the artery would, from proximity, have probably been unhealthy where it was required to be encircled by the ligature; and it would not have undertaken those sanitary changes of reparation which secure the perfect sealing up of its channel, but upon ulceration occurring have become the source of secondary hœmorrhage of a most hopeless nature.

Dissection of the Limb.—The tumor underwent an apparent hardening after the detachment of the limb, and was rather more firm; its measurement indicated no material reduction in size. Its chief projection was forwards and outwards. It presented a subdivision into two enlargments which were separated from each other by a sulcus corresponding to the

junction of the deltoid and brachialis anticus muscles; the superior was somewhat orbicular in its outline, and the inferior pyriform. It yielded a firm, solid resistance to the touch, as if of cartilaginous consistency The arteries of the limb were beautifully injected by Dr. Craik, our expert Demonstrator, and its dissection performed by us. The main artery was of larger size than ordinary, as well as its branches, some of the latter were very much increased in dimensions being swollen from mere twigs,—nameless from their littleness—to tubes rather exceeding a goose-quill in calibre—well deserving of distinctive appellations:—they ramified in a tortuous way over the surface of the tumor, and distributed numerous branches to it, which made its vascular supply to be extraordinarily profuse. The venæ comites were proportionately exaggerated, and distended into blue rolls, yet more excessive. The actual number of vessels seemed also to be increased. The tumor was more immediately enclosed by the biceps, brachialis, anticus, and triceps; the first were especially thinned, flattened, of increased breadth, and spread out over it so as to constitute a complete muscular investment.

Having made a mesian section of the humerus throughout its entire length, the interior of the mass was fully shown. Numerous puncta vasculosa came into sight, several were filled with wax, and corresponded to the arteries described upon the exterior. The division proved that the tumor had originated within the interior of the bone, and by expansion attained to the extreme size of the measures formerly enumerated. The shaft of the bone was lost in the outermost boundary, which was the densest part, and composed of bony granules and exudation deposit: this wall was supported everywhere, but especially in front and foundation, by a thick granular layer of fat, freely fed with minute arteries. Within was the popes substance of the disease, and, as perceived from the flat surface of either half, it exhibited an irregularly ovoidal outline, resolvable into two figures corresponding to the sub-tumors, by a defined line running opposite the external sulcus, and marking probably the situation of the original fracture. The periphery was principally of a purplish tint, and the coloring was disposed in the form of small festoons, which after maceration retained a brownish hue, and the intervals between them looked pale and fibrillated something like the cortical portion of the kidney. The space inclosed had, for the most part, a buff or dull yellowish fatty aspect, not dissimilar to consolidated marrow, but it was also diversified by the presence of dark, livid-looking spots here and there of unequal extent. It was of semi-solid nature, but sufficiently tenacious to permit of thin slices being separated. Traces of an interstitial formation of ossific matter were visible, as if, in the form of imperfect dissepiments. The morbid deposition extend-

ed through the medullary cavity, and terminated abruptly at the line of the epiphyses; towards its limits it appeared to be more soft pulpy and dark. The microscopical appearances I obtained were not sufficiently pronounced to justify my entering upon their description; and some of my friends, who also placed portions under their instruments, experienced a similar hesitation.*

Half of the bone was examined after it had macerated for 43 days:—it was a mere shell, below its neck it was expanded into a bulbous form and displayed a surface covered with ossicula, projecting more or less horizontally. They presented fine spars and delicate laminæ, so arranged as to make a spiculated rete or thorny net-work of beautiful pattern; their length was various, several jutted out an inch or more. In their midst was discernible a conformity to the bilocular disposition, already noticed, both in regard to the entire and divided tumor; the two cavities communicated through a coarcted portion, or rounded mouth. Close against the inside lay, remaining, several arterial (injected) trunks, each nearly of the magnitude of the ulnar artery. Several were of unequal bore in their course, and appeared to be varicose from being in the state called cirsoid aneurism. They were tortuous, and emitted branches also swollen at irregular points. Together they formed bunches of vessels, and the probability is, in the live-state, they all inosculated by multifarious anastamoses, were preternatural deviations from the nutrient or endosteal branches, and were so distributed as to have branched over the surface as well as pass through the interior of the diseased pulp, producing a vascular congeries of intricate arrangement.

What was the disease?—The presumption afforded by an inspection of the tumor would be that it was an osteocephaloma, but presumption is not always truth. Even actual dissection can fail to solve a mystery, for appearances may be disclosed which admit of different interpretations. According to some, the case before us is a strong example in point. Instead of assumed osteocephaloma, the disease, they might urge, was a myeloid tumor, and not without eminent authority. Mr. Paget refers to cases of these affections, in which he says "during life the diagnosis was impossible," and Mr. Gray confidently declares that an ocular examination of their internal structure "fails to detect any difference between them." He contends, however, that the microscope is sufficient to solve the difficulty. Were this absolutely true, and no alterna-

*Subsequently to the above, Dr. Fraser, an experienced histologist, observed in the juice of the tumor "clear oval cells of various sizes, but mostly large," which, after being tested by ether, shewed that their contents "had simply been converted into granules," there were no distinct nuclei.—W.

tive offering, the present case would remain an uncertainty; but I think it may be shown that a diagnosis is still practicable, even by the unaided eye, if derived from examinations, such as were conducted in this instance, by injection and after maceration. The grounds upon which it might then be established are these:

1. *Activity of Ossification.*

Osteocephaloma presents marks of formation of new bony substance, particularly an internal skeleton, and a shell remarkable for its deeply fimbrillated arrangement.	Myeloid tumors present no such evidences. Their pulp is boneless; their walls composed of the ordinary bone expanded and perhaps condensed.

A difference of opinion is expressed upon this subject as regards cancer. Cruveilhier, for instance, considers this lesion to be characterized by no new development of bone. It may, however, be explained by considering the varieties of cancer which, in this particular, differ as evidently from each other as osteocephaloma from myeloid tumor. Cruveilhier's observation is fully substantiated by the anatomy of hard cancers; wherever this peculiarity "hardness" exists the production of bone appears to be repressed, or even impeded, while on the contrary, the opposite state, "softness", is associated with an excessive osseous developement, and this law is so general that it applies not merely to different species, as between schirrus and medullary, but between varieties of the same species as the last named. Myeloid tumors have not such a consistency as would render fallacious the distinction; they are soft and, therefore to feel as well as sight, resemble ordinary soft medullary cancer, of which osteocephaloma is a form: accordingly, in a doubtful case, the rule above given may be safely trusted. Of its indications the most remarkable is the internal skeleton. This consists usually of a number of trabeculæ or bands, much branched, and decussating so as to leave irregularly open areolæ. The extent to which the fringe of the capsule may reach is strikingly represented by an instance recorded by the eminent Professor Gross of Philadelphia, in his valuable treatise on Pathological Anatomy. "A section of the tumor displayed an immense number of osseous spicules of extraordinary length and delicacy." It was probably an instance of progress by infiltration forcibly splitting up the bone into delicate layers which hypertrophied, and of regularity preserved by slowness of progress.

2. *Vascular condition of the tumor.*

Osteocephaloma is preternaturally vascular; the arterial, capillary, and venous systems are greatly magnified both about and within the diseased mass.	I have not discovered that myeloid tumors are distinguished by any preternatural vascularity whatever.

This peculiarity can only be appreciated by a carefully conducted injection of the extremity after amputation; and from the neglect of this auxiliary may have often eluded detection. Vascularity of this kind is an important feature of medullary cancer, and is a constant and certain one. It is virtually a teleangiectasis, the arterial and venous systems of the osseous tissue being greatly developed. Rokitansky has noticed the peculiarities of this state. As a feature of general medullary cancer, he says, "the soft loose parenchyma of genuine encephaloid is very richly beset with vessels, and they are remarkable for their large size and for the thinness of their walls." It might be thought the difference in this condition, between osteocephaloma and myeloid tumors, arose from the variation in the celerity of their growth, each respectively partaking of the ordinary character of malignant or benign tumors; but it must be remembered that rapid or slow developement is not the cause of the vascularity, but rather an occurrence within its influence or control. An adaptation is found to exist; the quickly enlarging tumor is furnished with the necessary circulatory apparatus, to supply the increasing wants of its multiplying structure; while the slower formation, not requiring an equal abundance of building plasma, is not supplied with a similarly great appendage. The number and size of the vessels are sometimes so ample that they would seem to be more than is required for the wants of the tumor, as in the case reported, still further evincing the real essentiality of this particular, as a sign of osteocephaloma, and therefore of discrimination between it and myeloid tumor.

3. *Number of Tissues Implicated.*

In osteocephaloma the disease is not confined to one class of structures—in time all the components of the limb become involved, so that periosteum, tendon, muscle, and all may grow up cancerous together as well as the bone.

Myeloid tumor does not invade any other tissue than that in which it has originated. For the most part it is limited in its developement and growth to the bone or its exterior membrane, where found.

Observe, it is not here stated that myeloid tumors are invariably peculiar to bone; but that they are limited to the structure wherein they begin: they are commonly met with as "bony tumors," but in some rare instances have sprung, like the medullary, from other situations. The difference, perhaps, may be expressed by saying myeloid tumors are solitary or connected with one tissue; cancerous are gregarious, intertwining with many tissues. This test is simple, and would at once serve to free the pathologist of any doubt about a given sample under inspection. If the disease appear as a monstrous growth within the interior of an osseous

case, or as a great hypertrophy of the normal elements of bone constitution, *i. e.*, medulla, endosteum, inorganic constituents, &c., the conclusion is in favor of myeloid; if, on the contrary, the lesion consist in a conversion of two or more of the proper structures of the part into a tumor more or less gross or dissimilar in composition to any normal entity—remarkable for being both multilocular and heterologous, and yet of one specific nature, no doubt will be felt in setting the affection down to the credit of malignancy. To vary the statement: the lesion is myeloid when the covering is osseous; osteocephaloma when the covering is osseous and cancerous, the latter produced at the expense of transformed bone, periosteum, muscle, &c. The researches of Mr. Gray into the subject of myeloid tumors (Med. Chir. Trans., vol. 39)—whose paper will repay an attentive perusal—would warrant our still further extending the present sign. In every case he examined, he found the tumor had taken its origin in the epiphyseal end of a long bone. He advances this as a corroborative fact to support his theory of the origin and nature of myeloid tumors, he believing they are "developed in those parts of the osseous system in which such structures exist in a most distinct and well marked form." But while this is accepted, let it not be forgotten that this localization is a really valuable diagnostic between them and the cancerous, which are not more prone to begin there than in the shaft, but on the contrary are frequently seen to begin in the shaft, and to stop abruptly at the epiphysis, as in the above case.

Osteocephaloma may begin in any part of the bone.

Myeloid tumors confined in its inception to the epiphyses.

Another fact of a practical order connected with this part of the subject is, that in all the cases of myeloid, that have been recorded, there has been a complete absence of all infiltration of its peculiar substance in the shaft of the bone beyond the connection of the tumor, the deposition ends abruptly, and the bone above and below is sound, so that amputation may be practised through the same bone from which the growth proceeds, nigh to the latter's situation, without the least apprehension of the osseous stump taking on the disease, or being visited by a recurring production. With osteocephaloma, however, the position is entirely different; the only safe operation is through a joint, and the removal of the entire bone wherein the lesion appeared; to leave any part behind were to leave a nidus in which, Phœnix-like, the malignancy would revive from the disseminated ashes.

It will be observed that the grounds assumed for the diagnosis are deducible from the case detailed; and if it be admitted that they

are sufficient to establish the distinction, endeavored to be drawn by them, between an osteocephaloma and a myeloid tumor, no reluctance can be had in assigning this example to the class of osteocephaloma, for, as "the dissection of the limb" will recall to mind, the characteristics now laid down of this class were severally present in an eminent degree. It exhibited an unusual activity of ossification both in its adornment of outward fringe, and internal skeleton,—its vascular supply was extraordinarily developed and strongly represented in a leash of enlarged vessels, the arterial components of which had walls so thinned as to become varicose,—it displayed a gregarious habit involving in its own destructive nature at least endosteum, bone and periosteum if not more structures,—and it originated in the centre of the shaft of a long bone and ceased at the epiphyses.

Exclusively of the microscopical differences, which will be found graphically described in various treatises upon Pathology and Anatomy, it were easy, if desirable, to pursue the differential diagnosis between osteocephaloma and myeloid tumor to a much greater limit, for as they are types of the great divisions of malignant and benign tumors so all the individual distinctions which characterize each group might be readily extended by a personal application; as, for example, the heterologous composition—rapidity of growth—self-multiplying power—tendency to ulcerate—specific character of the ulcer—disposition to implicate the lymphatic glands—cachectic impairment of the system, and concurrence of disease in the internal organs which are inseparably connected with medullary cancer, and as surely absent in myeloid tumor; those, however, which have been particularized are nearest related to the present inquiry and sufficient for its purposes.

Termination.—The rest of the narrative is soon told. The result was most desirable. The only adverse event, if such it can be called, that happened, was a slight sanguineous extravasation within the wound, and the blood being confined, by the cutaneous lips having united through primary adhesion, underwent consolidation; the subsequent clot remaining excited free suppuration, and, becoming broken down, mixed with the pus secreted so as to form rather a large collection. About the eighth day it escaped during the dressing. For a few days afterwards the discharge had still a grumous tendency, but its removal, as produced, was facilitated by the introduction of tents. Appearing to be likewise too abundant and thin, on the 15th May, one grain of Quinine in solution was prescribed three times daily, together with a pint of porter. From this period the amendment was decided, and proceeded steadily. No other medicine was given, except an occasional aperient

when necessary, and Imperial as an ordinary drink, which were allowed from the beginning. His diet was sustaining.

21st May.—Three ligatures came away upon gentle extension being applied. Discharge healthy, though rather more profuse than has lately been. Wound dressed, as before, and supported with compresses. No bad symptom; sleeps well, appetite good, bowels regular, tongue clean, cough much improved. These changes have been observed since his recovery from the immediate effects of the operation, the difference being only in degree or advance. Cont. Tonics, mutton-chop, &c.; has had permission for the last week to dress himself and walk about the ward and passages, and, when fine, across the gallery; and he has availed himself of the leave.

24th May.—Fourth and last ligature withdrawn Still progressing favorably. Countenance changed in expression, having lost its care-worn, haggard look. Face more full, and less anæmic looking.

29th May. Left the hospital and called upon me. The wound has filled with granulations, and is altogether healed, except at one small spot, where the last thread was extracted, which still gives exit to a little pus. Upon ascultation no bruit was heard over the heart, nor over the subclavian artery of either side. He returned to Cornwall this evening happy and thankful. From intelligence subsequently received, I have been glad to learn the wound rapidly advanced to perfect cicatrization.

ART. IV.—*Contraction of the Pupil a symptom of Intra-Thoracic Tumours.* By ROBERT L. MACDONNELL, M.D., Surgeon to St. Patrick's Hospital, Montreal, formerly Lecturer on the Institutes of Medicine and on Clinical Medicine, McGill College.

Within the last three years the state of the pupil has attracted the attention of clinical observers as a symptom of aneurism of the thoracic aorta, and it has been remarked that in all the cases recorded, except one, that an unusual *contraction of the iris* corresponding to the side upon which the tumour presented itself.

It is to Dr. Gairdner, of Edinburgh,* we are indebted for having added this interesting symptom to those already known, as aiding the diagnosis of thoracic aneurism, but he seems not to have been aware that I had already directed the attention of physicians to this curious point, as occurring in a remarkable case of thoracic cancer, and that I had even offered an explanation of the connexion of the symptom with

* Edinburgh Medical Journal for August, 1855.

the disease, on the same physiological grounds as have since been considered satisfactory in accounting for its presence. It appears that Dr. Banks of Dublin has also noticed this symptom in aneurism, but I have not been able to obtain the article in which it is recorded. It has again been noticed by Dr. Gairdner and others, and as it furnishes the clinical student with another sign common to aneurism and thoracic cancer, I have thought it useful to re-publish some of the observations which have already appeared in the pages of the British American Medical Journal for June 1850, abstracts from which were reprinted in Ranking's Digest and other journals. It is necessary that the observer should be made aware that this symptom is not *exclusively* a sign of aneurism, but may also occur in thoracic cancer, or indeed, in connexion with any tumour pressing on the sympathetic nerve, and I have been induced to lay the following case a second time before the profession, because Dr. Gairdner himself has stated that he was led to look for thoracic aneurism in a case presenting itself at the Royal Public Dispensary of Edinburgh, from the fact of noticing contraction of one of the pupils. It is well that practitioners be undeceived as to this being a pathognomonic sign of aneurism, and though it may add another difficulty to the correct diagnosis of thoracic tumours, yet it must be regarded as an addition to our stock of information on this point of pathology.

The case alluded to was detailed by Dr. Gairdner, at a meeting of the Edinburgh Medico-Chirurgical Society. "The patient, a middle-aged man, was shown to the Society. He had come under Dr. Gairdner's notice at the Royal Public Dispensary, and from one of the eyes presenting a well-marked diminution in the size of the pupil, Dr. G. was at once led to examine the chest, when evidence of the existence of an aneurism (probably of the arteria innominata) was obtained."—Edin. Monthly Journal for 1856-57. The patient died some months after, and an aneurism was found, though in an unexpected locality, viz., on the right lateral portion of the ascending arch of the aorta. The tumour tended towards the neck, *but did not seem to exert any pressure on the sympathetic nerve.* The effect on the pupil, however, proved that some of the filaments were involved. The case is said to have resembled one recorded by Dr. Williamson of Leith, in which the diagnosis would have been incomplete but for the contraction of the pupil.

"March 2d, 1850.—I was called to attend Miss———, aged 17. Two years before, she caught cold, having sat in damp clothes for a whole day; the catamenial discharge, which had been just established, was suddenly arrested, and did not appear for five months; she was attacked with pain in her left side, back, and top of the left shoulder. These

pains continued, and were followed by difficulty of breathing, and inability to lie upon the right side, but *without cough or expectoration*. After some months a small tumour appeared above the left clavicle, somewhat painful to the touch, to which, tincture of iodine was applied by her medical attendant. In the month of July she was sent to Upper Canada for change of air, but derived no benefit from it, and returned to Montreal in September, much worse. The tumour noticed in the neck had become enlarged, although not yet conspicuous; but it was painful, and this sensation extended up along the side of the neck At this period *slight ptosis of the left eyelid, and contraction of the pupil of that eye*, were noticed, and the iris did not dilate and contract like the other, in the transition from light to shade. In the winter of 1848-49, she complained much of pains in her arm and shoulder, particularly at night; In the spring, the following year she writes her father, "I first observed the left arm to have shrunk or withered conspicuously, yet the tumour in the neck had not much increased in size." The following summer was spent in Upper Canada, during the most part of which she suffered greatly from pains in the left side of the chest, in the back and shoulder, and from debility and dyspnœa. She returned to Montreal last September so altered in appearance that her father hardly recognised her; she staggered into the hall, "a poor emaciated creature, with a ghastly countenance of a blueish green colour. *She had upon her a constant hacking cough*, great shortness of breath, had lost all appetite, was reduced to a skeleton, and so weak, that she sank upon the bed, whence she did not rise for three weeks."

Present State.—The attention is immediately attracted by a large tumour on the left side of the neck, which protrudes upwards from the thorax. This tumour is of an irregular shape, somewhat globular, uneven on its surface, everywhere resisting, with the integument tense, shining, and œdematous. It is quite dull on percussion, and no pulsation, bruit or thrill is perceptible. It is not painful to the touch, nor is it the seat of any *constant* pain, though *shooting* pains occasionally proceed from it downwards to the fingers. The surface of the tumour is traversed by large tortuous veins, which anastomose freely with similar veins on the left side of the thorax, the left arm, left side of the neck, cheek, and left side of the forehead. The tumour has by its pressure, produced paralysis of motion and sensation of the left arm, and the pulsation of the ulnar, radial and brachial arteries, is completely obliterated. The whole of this arm and corresponding part of the chest are extremely œdematous.

Physical Signs.—The anterior portion of the left side of the chest is

full and prominent, and is continuous with the tumour, there being no depression to mark the supra and infra-clavicular spaces: the clavicle is dislocated forwards, its sternal end projects nearly an inch in front of the sternum. The left side of the chest does not move in inspiration; its intercostal spaces are obliterated, and an extremely dull sound with resistance is elicited by percussion from the clavicle to its lowest part, and the same dulness extends all over the side behind and laterally. The respiration is *bronchial before and behind, and there is also bronchophony*, but not the least râle of any kind. The upper portion of the right lung in front is clear upon percussion, but from the mammary region downwards it is quite dull. Behind, the respiration is loud and puerile, and without râle. All over the right mammary region the impulse of the heart can be seen and felt; its impulse is extremely abrupt and violent, and both sounds are accompanied by a *loud sharp ringing soufflet* of a peculiarly musical and metallic character, quite unlike anything I have ever heard. The apex of the heart strikes towards the right axilla. The right hypochondrium yields the usual dulness. *There was no increase of hepatic dulness below the ribs.* The left side of the chest *appears* to be increased in size, but I have not yet had an opportunity of determining this point. The inspiration is accompanied by great action of the intercostals of the right side, the expiration is accompanied by a *short stridulous grunting noise.* During the performance of inspiration the larynx (which is pushed towards the right side) is drawn across the mesial line to the left side. The voice has never been affected, and except during the severe attacks of dyspnœa, there is no stridor. The voice is naturally œgophonic. *She has no cough, nor does she expectorate anything. She has never had hæmoptysis, nor has she at any time had red currant jelly-like expectoration; but she is subject to frequent attacks of epistaxis, which invariably proceed from the left nostril.* At times this is rather profuse; at other times it is only sufficient to cause a blocking up of the nostril. The beating of the heart is frequently very troublesome; the pulse is small, about 120, sometimes more frequent, and sometimes less so; it is not intermitting nor irregular. There is *partial ptosis* of the left eyelid, which sometimes proceeds so far as almost to conceal the eyeball, and there is also *contraction* of this pupil, though this eye is quite as sensible to light as the other, and she can read with it quite as well. No matter to what amount of light this eye be exposed, the pupil is never dilated to more than one half the extent of the other. She never suffers from headaches, flashes of light before her eyes, noise in the ears, or frightful dreams. Occasionally her symptoms assume an hysterical character. Her tongue is clean, appetite pretty good, no dysphagia, stomach seldom

sick, bowels regular, urine secreted in natural quantity, skin moist, body greatly emaciated. *No pains in the chest.* Catamenia absent. During the prevalence of easterly winds, and before a fall of snow, her friends remark, that her countenance brightens up, she appears quite healthy, and her spirits improve; these are but the precursors of an extremely severe attack of dyspnœa, which is sometimes, however, warded off by the administration of an anti-spasmodic.

April 24th. Since the last account, the tumour has been gradually extending across the neck; it has pushed the larynx, trachea, and thyroid gland completely over to the right side, and now occupies the median line, and extends beyond it. *The right arm is now partially paralyse, and the pulse at the wrist is perceptibly smaller than it used to be; œdema and varicose veins occupy the right side of the chest, and the right arm is also becoming œdematous.* Since the last report, several severe attacks of dyspnœa and palpitations have occurred. It is noticed, that these attacks are invariably preceded by a temporary amendment—her spirits become cheerful, her strength increases, and the countenance becomes animated: the colour of the face, which is usually sallow and livid, changes to a bright rosy hue; but at the same time it is quite apparent that the tumour undergoes marked augmentation, and that the tortuous and varicose veins become more enlarged and turgid She slept well when free from spasm, and had latterly suffered but little from the pain in the chest and the shoulder. During the whole period of my attendance, I never heard her cough, nor had she ever any expectoration; she always lay upon her back. The degree of ptosis varied, but no change occurred in the state of the pupil. The bleeding from the nose occurred almost daily. Enlargement of the liver was noticed towards the close of the disease, and though the left side of the chest had become enlarged, and the intercostal spaces were raised even above the level of the ribs, yet her extreme debility and the increase of her sufferings induced by a change of position, prevented my measuring the chest accurately.

After a succession of severe attacks of dyspnœa, she expired.

The treatment consisted of generous, bland diet, a moderate quantity of wine, and the use of camphor, æther, opium, lobelia, &c., sometimes given conjointly, at other times separately, according to the judgment of her father, a gentleman of great sagacity, who from close and unremitting attention to all the phases and variations in her case, acquired a rare tact in the employment of these drugs. The neuralgic pains which attacked the chest, shoulder, and sometimes extended down the arm were always relieved by a warm lotion containing tincture of

aconite, in the proportion of one ounce of the common tincture to seven of water. Folds of lint saturated with the above lotion were laid over the painful parts, and evaporation prevented by surrounding the lint by piece of oiled silk. This application used to give great relief.

Post Mortem Examination.—Before opening the body, a careful examination was made by inspection, percussion and measurement, when the following circumstances were noted. The whole of the front part of the chest was œdematous, and traversed by large tortuous veins which anostomosed freely with the superficial epigastric veins. The greater number of these vessels were noticed upon the left side. The left arm, from the shoulder down to the hand, was much swollen from œdema, and at its upper part were numerous veins inosculating with those of the neck, chest and axilla. The right infra-clavicular space was depressed, the left was full and prominent and constituted part of the tumour already spoken of. The right shoulder was elevated, and the clavicle was separated to about the distance of an inch at its attachment to the sternum. Percussion yielded the same results as were noticed during life, with this exception, that there was complete dulness extending from the normal hepatic region, downwards for the extent of two inches below the margin of the ribs. The circumference of the neck and tumour measured above the clavicle, was 16¼ inches; the distance from the nipple to the sternal end of the clavicle 6 inches on both sides. The circumference of the chest upon a line with the nipples was 27 inches; it being on the right side 12½, and upon the left 14½ inches; distance from the right nipple to umbilicus 9½ inches, from the left 10½. Nothing remarkable was observed on any other part of the body, except extreme emaciation. On opening the thorax, the heart and pericardium were observed lying to the right of the sternum, and distant about three inches from the mesial line. The pericardium was quite healthy and contained no fluid, nor was it adherent in any situation. The heart was of natural size, and free from any disease whatever, either of its walls or valves. The left side of the chest was occupied by an enormous mass of encephaloid cancer, which adhered firmly to the ribs and was continuous with the tumour noticed in the neck. It was contained within well-marked cysts, which enveloped it in the same manner as the arachnoid surrounds the brain, and which when slit open, allowed the cerebriform masses to be seen, presenting well marked convolutions and sulci resembling those of the brain. In a few situations, hæmorrhagic clots intervened between the investing capsule and the surface of the mass. There was no adhesion to the front part of the ribs, sternum, diaphragm or pericardium. No trace of pulmonary structure could be seen, except at the diaphragmatic

portion of the tumour, where a thin layer of condensed lung was spread over it for a small space, and peeled off it, as if merely coherent from apposition—no bronchial tubes extended from this portion of lung to the cancerous mass, nor could any be traced in the latter—the left bronchus entered its upper part, but no traces of its ramifications could be discovered. Such were the characters of that portion of the mass within the chest, but as it was emerging from the latter situation, it had dislocated the clavicle and was indented by the latter bone. At this point, the tumour pressed upon, and stretched out the left subclavian artery and vein; the left carotid, though not so much interfered with, was pushed a little towards the mesial line. This artery as well as the pneumogastic and sympathetic nerves were pushed backward by a process of the growth which proceeded towards the lateral processes of the cervical vertebræ, to which it took a strong attachment. On the anterior part of the tumour, the sterno-cleido-mastoid, and the sterno-hyoid muscles were spread out in riband shape, and their fibres were separated from one another. The brachial plexus passed through the middle of the growth, and could not be completely separated from it, even by the scalpel. The third stage of the subclavian artery was obliterated by a coagulum, and was not much larger than the radial. The phrenic nerve passed over the most prominent part of the tumour. The œsophagus was pushed towards the middle, and, as noticed during life, the larynx, trachea and thyroid gland were shoved over into close contact with the right brachial plexus. The mass adhered firmly to the clavicle near the shoulder joint, and also took an attachment to the acromion, and a portion of it passed under the trapezius muscle. When removed from the body, the mass was weighed, and found to amount *to six pounds and a half*. The right lung was quite sound, except at its inferior part, where we found three small encephaloid tumours, of the size of large currants, growing from the surface of the lung and covered by the pleura. The liver was much enlarged from congestion, and when cut into, blood escaped in large quantity.

The other abdominal organs were all healthy. The brain was carefully examined. Some slight vascularity was noticed upon the pia mater, but there was no effusion either beneath the arachnoid nor in the cavity of the ventricles. The origin and course of the third nerve were accurately examined, but nothing abnormal could be detected, and the same remark applies to all the cerebral nerves and to the structure of the brain itself."

I have omitted the remarks bearing on the auscultatory phenomena, and upon the differential diagnosis, published in connexion with the above

case, and reprint those only which have reference to the state of the pupil.

As might be expected, some cause for the *ptosis* and *contraction* of the pupil was carefully looked for in the brain and third nerve, but without success: no trace of disease could be discovered. How then, are we to account for these symptoms? We know that ptosis is usually accompanied by a *dilated* state of the pupil, and by paralysis of the superior internal, and inferior recti muscles, and also of the inferior oblique; but, as was stated before, there was no paralysis of any of these muscles, and the pupil, though constantly contracted, became smaller and larger, according as the intensity of the light was increased or diminished. Nor can we suppose that the superior branch of the nerve was alone affected, for we know that that portion sends no twigs to the lenticular ganglion. If we appeal to experimental physiology, we do not receive a more satisfactory solution of the *entire* question; but for *part* of it we can account. It was ascertained by Longet and Reid, that division of the pneumogastic and sympathetic nerves, in the neck of some animals, was followed by *contraction* of the pupil, whilst in others it was followed by *dilatation*.* Now, if the same cause produce effects so opposite, on such a delicate organ as the iris, it merely proves that the division of these nerves acts, in disturbing the innervation of the organ, in one case producing a diminution of power of the circular, in the other, of the straight fibres of the iris; and if we admit this explanation to be correct, we can understand how, in an analogous experiment, the nervous power of the other branches of the third being diminished, (for it is evidently owing to the connection of this nerve, and of the fifth, with the sympathetic, that the phenomena are produced;) some of the muscles supplied by that nerve may be actually in a *slightly* paralytic condition, which may escape the observation of the patient, and of his physician, unless a strong antagonising muscle be in action, as in the case of the orbicularis palpebræ in the foregoing case, and then the diminished power of the levator palpabræ becomes at once apparent. I make use of the term *analogous experiment* advisedly; for it must be evident, that *pressure* on the pneumogastric and sympathetic nerves produced the same effect, for the time being, as division would have done: so that, in this instance, disease imitated the experiment of the physiologist, and went far to corroborate it. This view is borne out by what was frequently observed, that on those occasions when the tumour of the neck became enlarged and the venous system more congested, the ptosis was always more marked.

*Recently Dr. Hariéy and Professor Sharpley have found that division of the sympathetic in the neck is followed by contraction of the pupil.

Should the foregoing explanation not prove satisfactory to any of my readers, they are at liberty to account for the phenomena of *contracted pupil with ptosis, and without paralysis of the muscles of the eye*, the brain being healthy, upon any other hypothesis they may consider more convincing: I have offered the best that has suggested itself to me.*

The above remarks were published eight years ago, and though much discussion has recently been carried on by Budge, Bell, Harley and others, upon the physiology of the Iris, I have refrained from alluding to them, as the clinical fact is not thereby affected.

From the recent experiments of Virchow, it would appear that the condition of the pupil may not be dependant so much upon irritation of the sympathetic nerve as upon the condition of the circulation. He has shown that "the blood current exercises considerable influence over these parts, and that this influence is governed by certain fixed laws." The retardation of the arterial blood occasions first contraction and thereafter dilatation of the pupil." "The retardation of the venous blood from the head occasions contraction, and its restoration dilatation of the pupil."—*Edin. Monthly Journal*, 1856-57.

REVIEWS.

ART. IV.—*Rapport du Surintendant de l'Education dans le Bas-Canada, pour l'année*, 1856.

In looking over this elaborate Report we have been highly pleased in noticing the evidence it contains of the great progress which has been made during the last few years towards affording facilities for the education of every child in this section of the Province, and the perfecting of the system of public instruction amongst us. Much praise is certainly due to the Hon. P. J. O. Chauveau, the indefatigable Superintendent for Canada East, and his earnest *collabarateurs*, for the present satisfactory condition of public education. In the chapter on the statistics for the year 1856, he remarks:—

"Les tableaux statistiques qui forment l'appendice A de ce rapport méritent toute l'attention des hommes instruits et qui désirent se former une idée correcte du mouvement intellectuel de ce pays.

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* The iris receives a branch from the sixth nerve in several animals, and it has been supposed that it sometimes does so in man, which would account for the fact that the pupil has *not* been affected in some cases where *all* the other muscles of the eye were paralysed from disease of the third nerve: in the above case, the singularity consists in our having only one muscle supplied by the third nerve, and only one set of fibres of the iris in a state of semi-paralysis.

"Le département de l'instruction publique n'avait pas eu jusqu'ici d'officier spécialement préposé à la tâche importante de réunir et de compiler les renseignements qui parviennent à ce bureau de diverses sources. Il n'y aura donc rien de surprenant à ce que cette branche ait prise cette année une importance qu'elle n'avait pas eue et qui ne pourra qu'augmenter avec l'expérience que doit acquérir le clerc des comptes et des statistiques, M. de Lusignan dont le travail persévérant et habile m'a été de la plus grande utilité.

"En vérifiant de nouveau les calculs de l'année précédente on y a découvert quelques erreurs résultant d'un double emploi fait dans l'addition des tables de certains inspecteurs. Le sommaire révisé de toutes les institutions d'éducation, de leurs élèves et de toutes les contributions et cotisations se trouve être comme suit et montre encore cette année un progrès considérable.

	1853.	1854.	1855.	1856.	Aug. sur 1855.	Aug. sur 1854.	Aug. sur 1853.
Institutions..	2352	2795	2869	2919	50	124	567
Elèves.....	108284	119733	127058	142141	15133	22408	33857
Contributions	£41462	£59508	£62284	£101691	£39407	£42183	£60229

"Le progrès réel comme je l'ai déjà remarqué doit être jugé beaucoup plus d'après le nombre d'enfans qui profitent de ce qu'on leur enseigne que d'après le nombre de ceux qui fréquentent les écoles. Le tableaux suivant prouve cependant que, bien qu'on puisse désirer mieux, nous ne sommes pas non plus tout à fait stationnaires sous ce point de vue."

	1853.	1854.	1855.	1856.	Aug. sur 1855.	Aug. sur 1854.	Aug sur 1853.
Elèves lisant bien....	27367	32861	43407	46940	3533	14079	18573
Elèves écrivant.....	50072	47014	58033	60086	2053	13072	10014
Appr. l'Arit. simple...	18281	22897	30631	48359	17728	25462	30078
" " composée	12448	18073	22586	23431	845	5358	10983
Tenue des livres.....	.....	799	1976	5012	3036	4213	5312
Géographie	12185	13826	17700	30134	12434	16308	17949
Histoire.....	6738	11486	15520	17580	2060	6094	10842
Grammaire Française.	15353	17852	23260	39328	16068	21476	23975
" Anglaise..	7066	7097	9004	11824	2820	4727	4758
Analyse Grammat....	4412	9283	16439	26310	9871	17027	21898

The Superintendent has had prepared, blanks of reports which have been distributed to the principal educational institutions, to be filled by the authorities of such institutions for the purpose of obtaining information regarding subjects having an interesting bearing on public education.

"Les formules contiennent sept divisions principales: dans la première se trouve une description générale de l'institution, la seconde a rapport aux finances la troisième au cours d'études, la quatrième à l'état sanitaire de l'institution, la cinquième indique la carrière suivie par les élèves sortis depuis deux ans, la sixième et la septième le nombre des professeurs et des élèves rangés sous diverses catégories. Presque tous les renseignemens contenus dans les première et seconde divisions sont exigés par la loi. Ceux de la troisième servent à remplir beaucoup plus avantageusement l'intention qu'avait la législature en exigeant une description du cours d'étude suivi. La quatrième division est de la plus haute importance en ce qu'elle est propre à attirer l'attention des institutions sur les réformes hygiéniques ou sanitaires nécessaires et à faire connaître aux hommes de la science la statistique des maladies auxquelles est sujette la jeunesse studieuse. J'ai compris toutefois que ces renseignemens me seraient fournis bien plus librement et aussi avec plus d'exactitude si je me contentais d'indiquer les résultats généraux pour chaque espèce d'institutions. Le tableau suivant fait voir que l'état sanitaire de nos maisons d'éducations est en général des plus satisfaisans. Environ le quart des institutions n'ont pas jugé à propos de donner ces renseignemens et l'on doit tenir compte de ce fait dans l'appréciation que l'on fera de cette statistique."

	NOMBRE D'ELEVES ATTEINTS DE MALADIES GRAVES DANS L'ANNEE.								NOMBRE D'ELEVES DECEDES DURANT L'ANNEE.								
Classe d'institution.	Inflammation et autres maladies du cerveau.	Consomption, bronchites et autres maladies des organes de la respiration.	Pleurésie.	Maladies graves des organes digestifs.	Névralgie et autres maladies du système nerveux.	Fièvres et maladies épidémiques.	Luxations, fractures et autres accidents.	Nombre total d'élèves malades durant l'année.	Inflammation et autres maladies du cerveau.	Consomption, bronchites et autres maladies des organes de la respiration.	Pleurésie.	Maladies des organes digestifs.	Névralgie et autres maladies du système nerveux.	Fièvres et maladies épidémiques.	Tués accidentellement.	Noyés accidentellement.	Morts par suite d'autres maladies.	Nombre total d'élèves décédés durant l'année.
Colléges classiques	7	6	4	17	4	1	8	47	1	.....	...	.....	.....	...	...	...	...	1
Colléges industriels	6	6	5	14	1	9	7	48	....	2	....	...	.....	9	...	2	...	13
Académies de garçons ou mixtes	...	9	4	...	2	29	4	48	2	1	.....	.....	.....	4	2	12	17	38
Académies de filles	2	8	3	2	10	72	1	98	1	4	.....	1	.....	6	...	...	2	14
Total	15	29	16	33	17	111	20	241	4	7	.....	1	.....	19	2	14	19	66

"Cet état prouve la vigilance des directeurs des institutions. Les maladies graves des organes de la respiration n'ont pas été nombreuses si l'on a égard au climat; mais la proportion assez considérable de ces maladies, qui se sont terminées fatalement doit engager les directeurs des institutions à veiller sur la ventilation et le chauffage avec une sollicitude toute particulière. Les appartements ne sont pas toujours tenus à une température égale, il fait quelquefois beaucoup trop chaud dans les classes tandis que les corridors ne sont point chauffés. Le défaut de ventilation conduit aussi à ouvrir les fenêtres pendant les classes: toute imprudence de ce genre, dont les enfans robustes peuvent bien ne pas se sentir, ne manque jamais d'être fatale aux élèves faibles et mal disposés. Le nombre de quatorze élèves noyés accidentellement dans le cours de l'année doit aussi engager les maîtres à la plus grande vigilance dans les parties de plaisir, les promenades sur l'eau, etc."

We cordially approve of this effort to obtain information concerning the kind of diseases prevailing in our larger institutions of education, with the mortality that obtains. And we hope the "fourth" who did not judge it *apropos* to comply with Mr. Chauveau's request will on further reflection fill the blanks in our possession and send them in time for the next report. For medical purposes the classification is much too general, and we would respectfully suggest a more particular arrangement for future reports. The mortality is something fearful, the proportion of deaths to the number of those attacked by serious disease being as 1 to 3.65. From the returns, it is impossible to say what disease has been most fatal.

The Classical Colleges it will be observed, exhibit the fewest deaths, 1 only out of 47 cases of sickness. Next in order comes the Girls' Academies, shewing as they do 14 deaths to 98 cases, or 1 to 7. In the Industrial Colleges there occurred 48 cases of sickness and 13 deaths, a proportion of 1 to 3.7: while in the Boys and Mixed Academies 38 died out of 48 seized by diseases, or 1 to 1.26. This latter proportion is frightful, and should be strictly enquired into.

CLINICAL LECTURE.

On Conical Cornea and its Treatment, and on Gonorrhœal Iritis. By W. Lawrence, F.R.S., F.R.C.S., &c., Senior Surgeon to St. Bartholomew's Hospital.

(*Medical Circular.*)

Gentlemen,—We have had, since *Summer Session*, commenced

various instructive "eye" cases in the hospital, to which I wish to direct your attention to-day. Several severe cases of syphilitic iritis, with, and, I may say, without complications, as also a most unique case of that very singular disease "conical cornea." Iritis is a very ordinary disease in practice, so that your attention cannot be drawn to it too early in the session; it is also one seen under unexpected circumstances. The first case of which I may speak is that patient suffering under

INFLAMMATION OF THE EYE WITH GONORRHŒA.

You will remark, I say, inflammation of the eye attended with gonorhœa—not gonorrhœal ophthalmia; the diseases, in fact, are quite different, as well in their pathological seat and import asin their mode of treatment constitutional or otherwise.

In cases of gonorrhœal ophthalmia, of which I speak hereafter, it seems as if a patient labouring under gonorrhœa conveyed much of the puriform discharge immediately to the conjunctivitis, of which, no doubt, you have all read in your books; but in this patient now under our notice, with a gonorrhœal history of a somewhat like kind, the infection from some constitutional cause or peculiarity, probably of a rheumatic character, extended from the conjunctiva to the sclerotic coats of the eye: from thence even to the iris, causing great intolerance of light, with remarkable dulness of colour in the iris itself. To these signs of this affection were added profuse lachrymation, and, what I consider almost as pathognomonic of this class of cases, *most severe supra-orbital pain*—pain of a most remarkable kind, extending round the orbit, and, no doubt, in some measure engaging all the fibrous tissues of that part. Now, I wish you to remark that both these diseases arise under similar circumstances; yet this is, you see, quite a different thing from gonorhœal conjunctivitis, or a conjunctivitis of any kind, properly so called.

The supra-orbital pain of selerotitis is absent in the disease of the conjunctiva. The appearance of the patient himself is also peculiar; you can, in fact, scarcely mistake these cases when once you have studied them. Fortunately, this serious thing—gonorrhœal ophthalmia—is not very often seen in this hospital; but if any cases do offer themselves I shall take the opportunity of showing them to you*

The treatment of these cases differs, also, so that a proper diagnosis is not a matter of idle curiosity or ingenuity, but of necessity. In this patient we had to combat the inflammatory symptoms in the sclerotic

* Mr. Wilde, of Dublin, as previously stated in the CIRCULAR, has recently discovered that simple leucorrhœa in a married female produced as marked inflection in the conjunctiva as gonorrhœa.

coat with much vigour. Depletion and cupping on the temple were ordered and mercury used night and morning: calomel and opium, not for any specific action, so much as to stop inflammation. To these remedies we added a blister on the nape of the neck; yet all did not answer, and we were obliged to have recourse to the wine of colchicum —(3 ss., sex tis horis). This affected his stomach a little, as colchicum very often does, so that it is a drug requiring much caution in its administration. In my experience, however, I find that where the pain and sickness are induced, the action of the medicine is more certain and specific; still, great caution is also necessary, for very serious results have followed overdoses of this powerful agent.

If the colchicum* be used without due caution, even fatal results might arise, so that it will be necessary to watch its action with great care. I am not going now to enter into the minute diagnosis of sclerotitis, we shall see it as we go through the wards during the summer, and it will be better to point it out to you in the wards.

The next case I wish to speak more in detail about, is a patient suffering under what is termed.

CONICAL CORNEA.

The patient is E. W.———, a poor woman, it seems, who has been led about the streets quite blind. She is a comparatively young woman, only aged thirty six years; she has occasional flashes of light, she says, but with that sole exception she has been now thirteen years totally without vision of any kind.

This is a most singular disease, one of the pathology or nature of which we know absolutely nothing. As far as I have seen it during fifty years' experience (if possible to add to its anomalous character) it usually takes place in young and healthy subjects who have not suffered in any manner from excessive use of the eye, like watchmakers, needlewomen, printers, &c. This young woman, our present patient, you see, is perfectly healthy; she tells us nothing of any previous disease of her eyes; in fact, it is a gradual change occurring over a long space of time in a cornea otherwise healthy. I have seen the cornea in this state become in shape quite like a cone; the rays of light, too, present a most unusual appearance in conical cornea; the patient does not present the vacant, dull eye of the amaurotic patient, who holds his head

* It may be prudent to observe that very few surgeons share Mr. Lawrence's dread of the use of colchicum, at least in Hospitals. Mr. Hancock, uses tinct. of aconite in such cases, which is nearly the same medicine, and probably aconite and atropine will, ere long, supersede all the routine plans of calomel and opium, belladonna, &c. &c.

towards the sky whene'er he may chance to catch a glimmer—everything dark, dark,

"Amid the blaze of noon
Irrecoverably-dark, total eclipse."

There is nothing of this dulness or opacity of the eye in conical cornea, but no doubt you have observed it in this woman; the eyes here have an unusually bright appearance, sparkling like diamonds or those bits of cut-glass that sometimes represent diamonds! The rays of light passing into the eye in conical cornea are, I think, reflected (not refracted, mind you) before they fall on the retina, and are thus thrown into those singular glittering or diamond-like reflections in the vitreous humour and lens of the eye. I think that even on physical principles the blindness of the eye in conical cornea is to be explained; her eyes are like a telescope that has been pulled out in a wrong manner, or fixed at half cock. But neither a gun or a telescope will answer if fixed firmly at half the measure of its capacity. In the eye it must also very seriously impair the focus of vision, as you see it does in this poor woman. She says, over and over again, that for years she has been totally blind, led about like a child!

Well, on examining the eye with some care, I found that, though the cornea in each eye is in a very marked manner, bulged into a cone—from what cause I never could meet any surgeon who could exactly say—yet that the immediate circumference of the cornea, situated next the sclerotic, remained unchanged; indeed, few persons not familiar with the different varieties of blindness would detect that this healthy young woman, with what the story-books would call "brilliant eyes," was a poor creature almost totally blind. Any one accustomed to eye cases will at once distinguish these cases, however, from cases of photophobia, amaurosis, &c.†

† In these times, when sanitary science shows the value of light, it is very interesting, with the additional knowledge imparted by modern science, to study the early observations of Milton, who, "in the latter years of his life suffered severely from rheumatic gout, which, attacking his eyes, left him totally blind"—so severe this "dim suffusion" which veiled his sight! Speaking of light he exclaims—

"Thee I revisit safe,
And feel thy sovereign vital lamp: but thou
Revisit'st not these eyes that roll in vain
To find thy piercing ray."

And again, he makes the blind Sampson say—

"Since light so necessary is to life
And almost life itself—
Why was the sight
To such a tender ball as the eye confined."

Now, on the admission of this woman with conical cornea to hospital, having seen some similar cases benefitted by the only remedy I know of in these patients, I was anxious to give that remedy, which is belladonna, a full trial. I will now read some of the notes of the case:

May 5.—"The patient has had the belladonna applied" (I read in the notes furnished by the House-Surgeon) "since when, greatly to our astonishment, she begins to see objects all round her, and on bringing a book close to her face she sees the type and recognises the larger letters." Exactly so Now, the reason of that is at once obvious: I have already remarked that the immediate circumference of the cornea, next to the sclerotic, remained unchanged; very well, now comes the belladonna or atropine, and dilates the pupil; more light is thus permitted to pass, and through a healthy portion of cornea a mere line or so of pupil is left, and on bringing a book up to the face she can read very respectably indeed. It is remarkable and curious that the retina retains its sensibility for a very long period. Now, the conical cornea in these cases is subject to friction, and becomes roughened; you must be prepared also for that, but I am of opinion that in young and healthy subjects it will not give much trouble.

An elderly gentleman, a clergyman, quite blind, consulted me some time ago; he was perfectly well in all other respects, but he was totally blind, and had this singular disease of the cornea. A change had occurred, unfortunately, in this case, in the apex of the cone due to friction, it appeared quite opaque. The old gentleman was very far advanced in life, perhaps about eighty—an age, of which one is not fond of new experiments or new theories. It has been suggested now—by the new Ophthalmological School, if I mistake not—to make an artificial pupil in such cases. I simply ordered the atropine drops, from which he obtained a very fair amount of comfort; indeed, he went to church, he rode about in his carriage, took exercise, and, much to his delight, renewed his acquaintanceship with an old friend, the 'Times' newspaper! which he read, holding it up close to his nose and forehead. I cannot say that I am favourable to cutting operations in these cases; the palliative plan of atropine answers every purpose.

We next pass on to a different order of cases, but one which must attract, as it deserves your serious attention. The next is a case of

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"Almost life itself" is a very beautiful idea! Marshall Hall has shown that perhaps the first link in the long chain of actions ending in assimilation, digestion, &c., is a reflex action in the lenticular ganglion, and eighth pair from light exciting the retina.

SYPHILITIC IRITIS.

I may say, in the beginning, this has been a patient a little out of the ordinary hospital routine of such cases—a respectable young person coming to us in perfect health, but attacked with irritis! If we put the question of syphilitic or non-syphilitic to herself out of book, I should be disappointed if she answered it exactly as it might be wished. She comes to us from the country; she looks *something like a quiet governess* in a private family. Now, governesses may go wrong, I dare say, for all that you know, as well as those over whom they may be said to govern. It is very probable that we are favoured with this lady's society because she has kept the thing a profound secret up to the present. All this has a bearing on the case, however, and if we make any hand of it, it will be by going slowly, as there is such a thing as idiopathic iritis, rheumatic iritis, &c. She admitted that she had taken some medicine, but it was all Epsom salts, certainly nothing else. Well, not knowing much of what are now termed, in the phraseology of the day, this lady's "antecedents," or the amount of moral control she may or may not have practised as a governess on herself by way of example to her pupils, Mr. ——my House Surgeon, commenced what the newspapers call a "delicate investigation." She, of course, denied point blank all syphilitic taint, but on untying the strings of her bonnet—which she was requested to do, as you saw on the day of her admission—there were some copper-coloured spots under the ribbons, not as inviting as one would like; yet this was not sufficient for our purposes of a diagnosis, *though it left no* doubt on my own mind of the true nature of the disease; but we further made out: this is the month of May, but about last Christmas she had a discharge, attended by swellings in each groin, but she merely took small doses of Epsom salts, and did nothing else. She would not for the world have told the family surgeon. You will see the bearing of this 'delicate investigation' presently: she took her salts, and rested contented that it would all blow over. Now, let us retrace our steps with this new light. About five months ago, you perceive, she had primary syphilis: it may have been very slight; she had a discharge probably from an abrasion in the passage. Two months after she noticed the marks under the ribbons of her bonnet—viz., a scaly eruption, and now more of a copper colour, yet she very probably knew of no bearing of one of these things on the other.

May 4.—Together with the previous history, we find the left eye of this governess has been bad for ten days. She was ordered strong poppy fomentation and gray powder, ter in die—eight leeches to the temple,

When I first saw the muddy colour of the iris, and perceived that she complained of dimness of vision, that the pupil was contracted, and did not seem to answer to the stimulus of light, I had no doubt in my own mind of its being syphilitic iritis.

13th.—I need not go over the notes of treatment; they do not present anything worthy of stopping to remark on, as you have seen the case to-day; but here, on the 13th, she is reported as "nearly well!" the leeches and gray powder have answered their purpose; the iris is again safe; and she will probably leave the hospital, thus rescued from further temporising mischief.

Now, gentlemen, this history interests us all as surgeons. You see it is made up of quiet, confidential demeanour towards even the poorest patient; and when this is adopted you seldom fail to come down on the truth; the educated surgeon will not go astray, and then, also, it teaches you a great fact, as I take it to be, in the natural history of syphilis, to be arrived at in the same manner, that you may most undoubtedly have all the phenomena of syphilis, even in syphilitic iritis, without one grain of mercury having been previously administered. Iritis is said especially to be a "mercurial symptom." Some of my colleagues and many other surgeons express themselves strongly on this point of doctrine—a doctrine I do not hold at all. This young woman, as Horace says, was striving to drive out Nature, but still it would ever keep returning—

"Naturam expellas furcâ," &c.

She took no mercury; she dosed herself soberly with salts; but still we have the usual course of natural symptoms—an abrasion or an ulcer, probably getting well by cleanliness, and not using any irritating washes; then muco-purulent discharge, next buboes, all cured for the time by salts; then the inexorable spots under her ribbons, as completely copper coloured as ever I saw, and now iritis; but all, I am firmly satisfied, generated without mercury!

You probably know that the surgical world is divided into two opposing, if not hostile, camps: the mercurial and non-mercurial plan of treatment having each its ensign flying, and some battle—some Knights arrayed with their hosts on one side or the other; but of the natural progression of syphilitic symptoms, even as far as iritis, without the agency of mercury, I have had no doubt whatever; indeed, this single case—every bit of which is now coherent and simple—proves it. Do not be misled, then, by the supposition that diseases of the iris or periosteum are due to mercury more than to syphilis, for diseases of the iris brook no delay if you wish to preserve the integrity of vision in the organ.

THERAPEUTICAL RECORD.

(*American Druggists' Circular.*)

Painless Caustic.—M. Piedagnel, after various trials, has succeeded in producing a caustic that may be employed, causing little or no pain. It is formed of three parts of the Vienna caustic in powder and one part of hydrochlorate of morphia, intimately mixed together, and then made into a thick paste by means of chloroform, alcohol, or water. It is applied to the skin on diachylon. A black eschar is produced in fifteen minutes, increasing in thickness with the duration of the application. The morphia mixed in the same proportions with powdered cantharides, prevents pain during the rising of a blister. M. Piedagnel, who at present has only used this means for the production of issues and blisters, states that the action of the morphia is merely local.

Hydrocele treated by Electricity.—Dr. Rodolfi of Milan, has applied electricity for the cure of hydrocele in four cases, and reports very favorably concerning its effects, not only the fluid disappearing in all, but its reproduction being prevented in three of the cases. Bunsen's, or better still, Daniel's pile should be employed.

New local application in Erysipelas.—M. Anciaux speaks in high terms of the following application for erysipelas and some other cutaneous affections. Alum reduced to impalpable powder, 30 parts; white precipitate, 1 part. Rub up well together, and place the powder in a bottle, and then add from 90 to 100 parts of glycerine. Shake the bottle until the mixture assumes a creamy consistence, and repeat the shaking whenever the application is about to be employed.

Sulphur and Nux Vomica in Hæmorrhoids.—M. Van Holsbeek recommends the following formula as being rapidly beneficial:—℞. Sulphur loti. sacchar. alb. *ää*, ʒ j.; extr. strych. nuc. vomic. gr. vj.; mucil. gum. *tragacanth. sufficient* to form twenty-four lozenges. The patient is to take two the first day, increasing the dose by one daily until six a-day are taken. He now rests a few days, and then diminishes the dose in the same proportion, until he gets to the two again. If the cure is not complete, he must begin again; but it is rare to find the treatment required for more than a week. During its continuance alcoholic drinks and a too stimulating diet are interdicted. The treatment is applicable to all stages of uncomplicated hæmorrhoids.

A Specific for Scabies.—At the last meeting of the Academy of Sciences, Paris, M. Bonnet of Epinal, sent in a paper, announcing that benzine is a specific for the itch. The author of the paper states that if benzine be rubbed on the parts affected, and also very slightly on the other parts of the body, a cure will be effected in the course of five minutes, after which time the patient may take a warm bath for half an hour. Nevertheless, in cases where the itch is accompanied with a secondary eruption, the latter will require a separate treatment.

A Cheap Collodion.—Steep white printing or machine paper in concentrated sulphuric acid from five to eight minutes, and then wash and dry it. It becomes now as stiff as parchment; and if we cut it up small and digest it to ether, we obtain a substance not very different from common collodion, at a much cheaper price.

Valerianate of Ammonia for Epilepsy.—In Salpetriere and the Bicetre at Paris, the following formula has been much used in epilepsy for years:

℞.	Aqua distil., ...	pts. 95
	Acid valerian, ...	" 3
	Sub-carb. ammon., q. s., ad neutral acid. adde	
	Ext. alcoholic valerian, ..	pts. 2

Mix. Dose, teaspoonful three times a-day.

PERISCOPE.

Treatment of Chronic Rheumatism with Arsenic. By JAS. BEGBIE, M. D. &c. &c. of Edinburgh.

It was at the close of the last century that cod-liver oil was accidentally introduced into practice, in the wards of the Manchester infirmary, as a remedy in chronic rheumatism. It was in the same place, and in a similar manner, some years subsequently, that arsenic was first administered for the cure of that disease. In the writings of Haygarth and the elder Bardsley will be found many cases illustrating its efficacy. In more recent times it has not disappointed expectation. Speaking of the use of arsenic in chronic rheumatism, Dr. Christison says, "I have known several cases of this nodosity of the joints, as some authors term it, get well under the continuous administration of arsenic for some weeks: and it appeared to me that the commencement of the cure concurred with the first development of the physiological effects." "Arsenic (says Dr. Fuller, one of the latest writers on rheumatism), judiciously administered, and carefully watched in its effects is one of the most valuable remedies in the chronic forms of rheumatism."

Many years ago, an industrious workman, approaching the decline of life, applied to me for the relief or cure of the crippling and painful swellings of the small joints of his hands, and particularly of his feet under which he had long labored, and by which he had been rendered utterly unfit to pursue his usual avocations. The pains became aggravated at night, and under vicissitudes of temperature, and the patient was sensitively alive to changes of weather. It was with great difficulty and considerable suffering that he had been able to hobble to my door. When I speak of his case as one of chronic rheumatism, I sufficiently describe it. Under remedies external and internal, orthodox and empirical, he had derived no benefit; and seemed almost hopeless of relief. He was ordered to take five drops of the liquor arsenicalis after each meal, and to add one drop every third day till the eyelids became affected. He faithfully followed the prescription for many weeks, and

underwent the trifling disorder which characterizes the operation of the drug. He continued his attendance for several months. The knobbiness, and stiffness, and pain of his joints gradually subsided and disappeared: he walked repeatedly to my house, a distance of a mile and a half, with ease and comfort; he improved in general health; at last he ceased his attendance, he returned to his workshop, and I saw no more of him.

A married lady, in the prime of life, the mother of several children, the descendant of gouty ancestors, and a sufferer in earlier years from painful and disordered menstruation, consulted me last autumn, for symptoms corresponding in some measure with those exhibited by this workman. She was very lame from the stiffness, swelling and deformities of her toes and ankle joints, and quite incapable of holding a needle, or directing a pen, from the painful nodosities of her fingers and hands, the distorted appearance of which presented a remarkable uniformity on both sides of the body—symmetrical, in obedience to the law of blood diseases, as noticed by Dr. Budd. She had feverish, restless nights; a worn-out, emaciated look; a tendency to hectic paroxysms; a depraved appetite; a loaded tongue; along with copious lithates in the urine and considerable derangement of the biliary secretions. These symptoms had supervened on a miscarriage she had suffered in the spring, followed by a protracted and anxious attendance on a near relative during a dangerous illness. The severity of the attack had, in a great measure, subsided before she came under my care. She had been judiciously treated in the north of England, where she usually resided: colchicum, iodine, and various other remedies had been employed; but her disorder went on. After it had been corrected to some extent by depurants and laxatives, without any relief to the local disease, she was ordered to take the liquor arsenicalis in the usual dose, and with the usual instructions. She continued two months under my care; the medicine was taken regularly during that time; no well marked physiological effects ensued; but a gradual improvement in the condition of the feet and hands took place; she was able to walk with comparative comfort, and to handle her knife and fork, with ease. Her general health had improved, the secretions of the kidney and liver had assumed a normal character; she added to her usual remedy the free use of lemon juice, and an occasional warm bath. She left Edinburgh, with instructions to continue the arsenic, and begin the use of cod liver oil. I learned, in the course of a month, that she had *made progress towards ultimate cure; that the pains, and swellings, and* stiffness were gradually subsiding; that a fullness of the eyelids had been observed, along with a dryness of the mouth and tongue; that she had intermitted the use of the arsenic for ten days, in consequence of

these symptoms concurring with uneasiness and slight pain in the stomach; but that she had failed to witness any of the other phenomena for which she had been directed to watch. I subsequently learned, that with the exception of the short interval referred to, she had persistently taken the arsenic for three months, without any other unpleasant consequences than those alluded to; and had, on the contrary, during the time it was suspended, experienced some increase of the pain, and stiffness of the small joints, which had, however, given way on her resuming the medicine. She was directed to continue the use of the mineral in diminished doses, and to adhere to that of the cod liver oil. The last accounts state that she is greatly improved in health, and able to walk with ease to a considerable distance.

The case of the lady differs in some respects from that of the workman. His presented the true characters of chronic rheumatism; her's manifested those of rheumatic gout, as it is called, a painful and obstinate affection to which females suffering from disorder are peculiarly liable. It will be remarked, that in the former case the mineral acted quickly and successfully; in the latter its effects, both physiological and curative were slowly and imperfectly developed. The cases together, bear witness to the correct observations of Dr. Bardsley, and the earlier exhibitors of arsenic in chronic rheumatism— that while in the one form of disease the medecine will be found to cure without assistance, in the other form it will be necessary to call in the aid of other remedies. Still, in the language of Dr. Fuller, it will be found "a faithful ally."—*Edinburgh Med. Jour.*

The Medical Chronicle.

LICET OMNIBUS, LICET NOBIS, DIGNITATEM ARTIS MEDICÆ TUERI.

McGILL UNIVERSITY.

We transfer the following information regarding McGill College and its medical faculty, from the pages of the "Journal of Education." It appears in one of a series of articles on "the Colleges of Canada," from the pen of the Hon. P. J. O. Chauveau, the talented Superintendent of Education, C.E., and now in course of publication in the columns of that useful Journal. By the author's kindness we are enabled to present our readers with the wood-cuts which accompany his remarks.

Speaking of the founder of McGill University, he remarks:

Mr. McGill was a native of Glasgow, (Scotland) having been born in that city on the 6th of October, 1744. He came to this country at an early age, and engaged immediately in mercantile pursuits. On the 2d of December, 1776, he married Charlotte Guillemin, daughter of the late Guillaume Guillemin, in his life-time councillor of the King of France in Canada, *lieutenant-général* of the admiralty of Quebec, and judge of prerogatives, widow of the late François Amable Trottier DesRivières.

He was successively member of Parliament for the city of Montreal, and Member of the Legislative and Executive councils, colonel of militia and brigadier-general of the same during the war of 1812. During a great part of his life he lived in the house at the corner of the "Place Jacques-Cartier," on Notre-Dame Street, which is now occupied by public offices. It was then one of the finest residences in Montreal.

Mr. McGill was distinguished for his charity, his sound practical judgment and his kindness of heart, and he mixed much in society both with the English and French, being connected with the latter by his marriage. He died on the 19th of December, 1813, being 69 years of age, in the city of Montreal, where he had resided ever since he came to Canada.

By his last will, Mr. McGill "gave to the Honorable John Richardson and other trustees, his farm and land called Burnside, situated near the city of Montreal, containing about forty-six acres, together with the dwelling-house and other buildings thereon erected, upon the condition of their conveying the said property to the Royal Institution for the advancement of learning, established by an Act of the Parliament of the Province of Lower Canada, entitled "An Act for the establishment of free schools and the advancement of learning in this Province." But in case the said institution should not, within the space of ten years from the time of his decease, erect and establish on the said tract of land, an University or College for the purposes of education and the advancement of learning in this Province, with a competent number of professors and teachers to render such establishment effectual and beneficial for the purposes intended, it was provided that the trustees should convey the said property to Mr. François DesRivières, the son of Mrs. McGill by her first marriage. It was also provided that the college or one of the colleges of the University to be so erected should bear the name of the donor. Moreover, he gave under the same conditions to the Royal Institution a sum of ten thousand pounds, for the maintenance and support of the said college or university, which sum was also to revert to Mr. DesRivières in case of non-compliance with the intentions of the donor. This sum, if not paid immediately, was to bear interest after three years.

The estate of Burnside is situated near the mountain of Montreal, on the road that leads to the Priests' Farm, in a commanding position, and its value, like that of all properties lying in the same direction, has been daily increasing since the bequest was made of it by Mr. McGill.

As to the other part of the bequest, when paid over to the college authorities, after a long protracted suit with the heirs, who had been advised by eminent counsel that the legacy was null, it amounted to £22,000.

The intentions of Mr. McGill did not meet that prompt execution which they merited. Great delay occurred before any movement whatever was made for securing the bequest and giving effect to his wishes. At last, a Royal Charter was obtained in 1821. In 1829 the estate o Burnside was surrendered by the residuary legatees, and in 1835 judgment was rendered against them for the legacy of £10,000 with interest.

The first step towards giving to the University a practical operation, was the establishment of the Medical Faculty, which, with the exception of two years, has always since been kept in activity. It has always been the most flourishing department of the institution, and has been for many years the only one in active operation. It was created by the merging into the University of a pre-existing institution, "The Montreal Medical Institute."

The buildings which had been commenced in 1839, were completed in 1843, and although parts of them are still in an unfinished state, they were ready for the reception of students on the 7th of September.

The original plan of these buildings embraced a centre building and two wings connected with corridors. Only the centre building and one wing on the left side have as yet been erected. Since the erection of Burnside Hall, they have been occupied as residences by several of the officers of the college, and Mr. Fronteau, the professor of French, receives in one of them a certain number of pupils as boarders. Young men from the country or from Upper Canada have the advantage under that arrangement of a very comfortable boarding house, together with that of learning the French language from one who is highly conversant with all its niceties and difficulties.

As may be seen by the accompanying engraving the College buildings are placed in a commanding position and are surrounded by a large space of ground, containing some fine trees and which has been improved recently by planting and the formation of a central avenue. It is expected that the College authorities will ere long complete the original design of the buildings, and hold in them the classes of the faculty of arts as intended at the time of their erection. When completed, the whole front of the edifice will be 350 feet, and elevated as it is on a terrace, an

surrounded by ornamental grounds it will have a very imposing effect. Even in its present state, the McGill College is one of the most remarkable objects in the scenery of the mountain of Montreal, and never fails to attract the attention of the tourist.

The huge wall in the rear of the College is the terrace or embankment of the reservoir of the city water-works, deserving attention and which draws many visitors to that spot. The site of the College buildings as we have said was for many years a very inconvenient distance from what was then the city of Montreal; but it must be admitted that the directors cannot be blamed for its selection, particularly if they then had in view the rapid development which the city is acquiring every day.

We were much amused a few days ago, in looking at the engravings in a book published the very year in which the foundations of the College buildings were laid. (1) Most of the edifices, which are seen in the plates have disappeared and are replaced by others of much greater dimensions and of much better appearance. Tracts of land which were then gardens and fields are now covered with elegant houses; in fact, are the handsomest wards of the city.

In these engravings the General Hospital, in Dorchester street, seems to stand in the middle of a field, and the McTavish house, which is near the McGill College buildings at the mountain, has the appearance of a castle built in a forest. Now, Sherbrooke street and the mountain itself to a great distance beyond the Priests' farm, are covered with some of the most beautiful residences of the country, which are daily springing up in every direction. If we may judge of what will take place during the next twenty years by what we have seen since 1839, we can say without fear that the present site will then be a very central and eligible one. At all events it affords a most delightful view of this elegant and glittering city, which is perceptibly growing under our eyes, and a distant glimpse of the blue waters of the St. Lawrence with its many verdant islands.

In addition to the buildings we have described, the members of the Faculty of Medicine hold a two story brick house of plain exterior situated in Côté street. On the ground floor there are two large rooms occupied as a library, museum, and lecture room. It is intended by the University to acquire this building and to enlarge and improve it to meet the increasing demands of the Faculty for additional accommodation.

As we have already stated, the Faculty of Medicine has from its commencement been a prosperous and important department of the University. The thoroughness of its course of studies has given it a high reputation

(1) Hochelaga depicta, by N. Bosworth, Montreal, 1839.

and so established the value of its degrees that its certificates are received by the University of London and other British Colleges.

The Dean of the Faculty is Professor A. F. Holmes, who has held that position for many years, and was connected with the University since its first establishment in 1823. He is now the senior professor of the whole University, and consequently the senior professor of the Universities of Canada. He was also, when few men gave attention to these subjects, most influential in founding the Natural History Society and promoting the study of that science.

Professor Holmes lectures on the theory and practice of Medicine, including a full course of pathology. The other professors of the Faculty are: Dr. Campbell on Surgery, Dr. Hall on midwifery and diseases of women and children, Dr. Frazer on the institutes of Medicine, Dr. Sutherland on Chemistry, Drs. Scott and Craik on anatomy, Dr. Wright on materia medica, Dr. Howard on medical jurisprudence, including toxicology, insanity, and medical police, and clinical medicine, Dr. McCallum on clinical surgery. Students are also required to follow one course of the classes of botany and zoology in the Faculty of Arts. The lectures of Drs. McCallum and Howard are given at the Montreal General Hospital twice in each week, and visits are made daily to the Hospital by the students.

The professors are all gentlemen well known in the Community and some of them are known by their contributions to science. Dr. Hall has been for several years the editor of a medical periodical, and Drs. Wright and McCallum are now publishing the Medical Chronicle, a valuable review, the sphere of utility of which is about to be extended by the insertion of articles in the French language.

The tickets of the Faculty of Medicine are received by the British Colleges and by those of the United States, whose tickets under similar regulations, are likewise received by McGill College.

The library consists of nearly 3,000 volumes, among which are found not only the most valuable works for reference, but recent standard works on all the departments of medical literature, and moreover, those elementary works which are chiefly adapted for pupils, the use of which they are allowed without charge.

The museum, besides the preparations (dry and wet) of healthy and diseased structures, contains a considerable number of artificial preparations in wax and composition from the manufactories of Guy and Thibert of Paris. The institution is also provided with an ice house and large and well ventilated dissecting rooms.

OBITUARY.

JAMES BARNSTON, M. D.

Since the last number of the *Naturalist* was issued, the most active members of its Editing Committee, and one of the principal and most valued contributors to its columns, has passed to his rest. On Thursday the 20th May last, Professor James Barnston, M. D., after a long and severe illness, breathed his last, at his residence in Little St. James Street, in this city. The deceased was the eldest son of George Barnston, Esquire, Chief Factor of the Hon. Hudson's Bay Company. He was born at Norway House, in the Territories of that Company, on the 3rd July, 1831; and, consequently, at the time of his death, had not completed his twenty-seventh year. He began his studies at Red River Settlement in 1840, and remained there for a period of five years. He was then removed to Canada, where his education was principally of a private nature; but he early distinguished himself by his thirst for knowledge, and especially pursued with assiduity those preparatory studies suited for the learned and honourable profession it was his intention to enter; and of which, had his life been spared, he would have become a distinguished ornament. In 1847 he went to Edinburgh, and entered upon the study of Medicine at the University there. He went through the usual course, and in 1851 passed the final examination for his degree with the greatest credit. Being then under age, he did not receive his diploma till the following year. During the third year of his course he filled the post of House-Surgeon to the Royal Maternity Hospital; an office which he resigned on passing his examination. He subsequently became assistant to a Physician in extensive practice in the town of Selkirk and adjacent country; but on receiving his diploma in the Spring of 1852, he went to the continent, with the view of "walking" the Hospitals there, acquiring additional knowledge of his profession, and completing his medical studies. He remained there over a year, principally in Paris and Vienna, and received the highest certificates from the Medical Directors of the Hospitals where he attended. In October, 1853, he returned to Canada, and commenced

practice in Montreal; and, consequently, at the time of his death he had been upwards of four years a Physician in our city.—We have said that he graduated at Edinburgh, before his twenty-first year, with the highest honors. During his stay at the University he carried off several prizes, two of which were for Botany, one of his favorite studies. In Medical Science, Midwifery was the particular branch to which he devoted himself. He made it, indeed, to some extent, a special duty. In the year 1857 he was appointed to the newly-established chair of Botany in McGill College; and had nearly completed his first course of lectures when prostrated by illness. His class-lectures were distinguished by an intimate knowledge of his subject, clearness of illustration, and appreciation of the difficulties of learners, which gave earnest of the highest success as a teacher of this delightful branch of natural science. During his studies in Scotland, he made a large collection of Botanical specimens; and it was his delight, when time and opportunity offered, to add to and increase this from the great variety to be found on the Mountain, and in the vicinity of Montreal. He had commenced a detailed catalogue of Canadian plants, which it is hoped may be sufficiently advanced to be in part, at least, published; and which would have given him a high place in American Botany. Dr. Barnston held until the time of his death the office of Curator and Librarian to the Natural History Society. He was one of its most valued members, and foremost and most active friends. He read many interesting papers, and delivered many delightful, and instructive lectures, before its members; and among those of his own age, whom he has left behind, we fear the Society will find few upon whom his mantle will fall.—In private life, the Doctor was quiet, unassuming and gentle. There was something about him which provoked to love; and to those with whom he was intimate, he was a friend indeed. For a young man who had so lately entered upon the practice of a profession numbering so many old and honoured members, he enjoyed a large share of the public patronage; and his devoted attention at the bed-sides of his patients, and the uniform kindness and gentleness which characterized his treatment of them, would in time have assuredly gained him an extensive practice.—A constitution naturally

delicate, and ardent devotion to his scientific and professional pursuits, conspired to invite and hasten the inroads of disease; but, unwilling to abandon his cherished fields of usefulness and study, he held out to the last, and worked until the night had come. He then resigned himself meekly to the will of God. His sufferings at times were very severe; but he bore them with resignation; and his end was peace. He was a member of the Church of England; and was cheered by the prayers of its Priests, and received at their hands the Holy Communion shortly before his last hour came. He leaves behind him a young wife, to whom he had been married scarcely a year, and an infant daughter. It were vain in us to attempt to console them under their sad bereavement. But God tempers the wind to the shorn lamb. The husband and the father is not lost, but gone before. He cannot return to us; but if we strive, and watch and pray, we shall assuredly go to him :—

"'Tis sweet, as year by year we lose
Friends out of sight, in faith to muse
How grows in Paradise our store.

"Then pass ye mourners cheerly on,
Through prayer unto the tomb,
Still, as ye watch life's falling leaf,
Gathering from every loss and grief
Hope of new spring and endless home."

Dr. Barnston's remains were interred on the Monday following his decease. The Principal, many of the Professors and Students of McGill College, the Dean and a large number of the Medical Faculty, and a great concourse of friends, followed him to the grave. He sleeps in a quiet nook in our new Cemetery—on the side of that Mountain he has so often traversed, in order to gather fresh specimens of plants and flowers, to illustrate and adorn the science he loved so well.

A. N. R.

—*Canadian Naturalist*, June.

THE COLLEGE OF PHYSICIANS AND SURGEONS OF UPPER CANADA.—A Bill has at length been drawn up and presented to Parliamentary notice, with a view to incorporate the members of the Profession in Canada West in a body, having the above designation, and vested with full corporate powers;—and also with the further object of regulating the study, licensing, and practice of medicine, &c., in the aforesaid section of the Province. The organization appears to us to have been modelled upon the plan by which the College of Physicians, C. E., has been constructed, the differences being for the most part nominal, as for instance, that the Board, by which the affairs be managed, are to be styled the "Council," and the members be distinguished by the title of "Fellows." The Fellows are to be elected by ballot, and at the first election, which it is proposed shall be held next September, only licensed practitioners of the Medical Profession shall be entitled to vote. The Upper Province is to be, as it were, divided into divisions called "Electoral," and one Fellow is to be chosen in each of these from among the Physicians therein resident. The representation is also to be proportioned to a number hereafter to be settled upon. While the Council is, as we understand the intended act, to attend to general details, as before expressed, its Fellows are also, ex officio, members of a "Court of Examiners," before whom all candidates must appear who are desirous of enrolling themselves as students or obtaining a license to practise. All examinations are to be open and by written questions and answers.

CRIMINAL LICENTIATES OF THE COLLEGE OF PHYSICIANS, C. E.—A Bill has been brought before the House, having for its object the disqualifying of Practitioners, who may have been convicted of felony, by depriving them of their licenses. It passed a first reading on the 18th of last month. The principal provisions are the following, which we quote entire. The third refers to the disposal of the penalties, which is to be at the discretion of the College of Physicians, C. E, and the fourth to the publicity of the act. It only comprehends the Licentiates of the above-named body. We consider the step to be a very proper one, and most deserving of the Legislative sanction.

"1. Any Licentiate in medicine, surgery, or midwifery, who may have received his license so to practise as such, either from the incorporated College of Physicians and Surgeons of Lower Canada, or from the legally appointed Medical Boards of the Province antecedent to the time of the passing of the said Act of Incorporation of the said Colleg[illegible]ll, after due conviction of any such felonious practice or felony, be deemed no longer a Licentiate of the said College, or otherwise qualified to practise medicine, surgery, or midwifery,

within the Province of Lower Canada, and be placed in like position to one who has never received such license so to practise."

"II. After due notification by the Board of Governors of the College of Physicians and Surgeons to the party practising in contravention of the next preceding section, the Board of Governors of the said College shall be empowered, and they are hereby empowered, upon common notoriety of such practice by the said party, and upon proof of the same in any suit or proceeding by the said College against the offender, to recover from such offender the same fines and penalties as are imposed by the said Act of Incorporation of the College of Physicians and Surgeons of Lower Canada, against all persons who practise medicine, surgery, or midwifery in Lower Canada, without a duly received license to that effect from the said College."

STATEMENT *of Income and Expenditure of the Toronto General Hospital, from 1st January, 1857, to 1st January, 1858.*

RECEIPTS.

	£ s. d.	£ s. d.
Rent and Interest,	.....	1494 0 0
Sales Account,	.....	538 15 0
Pay Patients,	.....	43 4 0
Admission Fees,	.....	63 10 0
Donations,	.....	59 7 11
Provincial Grant,	2000 0 0	
Do. for Country Patients,	1500 0 0	
		3500 0 0
Sale of Debentures,	.....	2500 0 0
Loan from Bank of Upper Canada,	.....	1000 0 0
Bank of Upper Canada, amount overdrawn,	.....	160 8 0
Balance on hand, 1st Jan., 1857.,	.....	171 17 0
		9531 2 8

DISBURSEMENTS.

	£ s. d.	£ s. d.
House Expenses,	2?48 6 7	.....
Salaries and Wages,	1010 6 4	.....
Medicines,	172 18 9	.....
Furniture,	53 18 3	.....
Contingencies,	491 19 3	.....
		4477 9 2
New Hospital Account,	.....	2376 1 6
Bills Payable,	.....	2000 0 0
Interest on Debentures,	.....	600 0 0
Balance, 1st January, 1858,	.....	77 12 0
		9531 2 8

J. W. BRENT, Secretary and Treasurer.

STATEMENT *of the Current Income and Expenditure of the Provincial Lunatic Asylum, for one year, from* 1*st January to* 31*st December*, 1857.

EXPENDITURE.	$	c.	INCOME.	$	c.
Medical Department,	1589	33	Cash, balance on hand, 31st December, 1856,	3	00
Household Expenses (Food),	21262	28	Bank of Upper Canada, balance on hand, 31st Dec., 1856,	1272	38
Bedding and Clothing,	4815	76	Articles sold,	119	62
Fuel, Light, Washing, and Cleaning,	9806	52	Discounts,	1	05
Insurance,	625	00	Branch Asylum, articles sold,	18	05
Removal of Patients,	224	22	Paying Patients,	3466	83
Draining,	152	52	Warrants,	85042	53
Coal Sheds,	1415	75			
Ash Pits,	514	28			
Advertising,	126	00			
Stationery and Printing,	178	95			
Straw,	412	06			
Interments,	217	75			
Furniture,	963	00			
Incidentals,	269	08			
Farm,	821	23			
Repairs,	3424	40			
Commissioners,	747	00			
Salaries and Wages,	12661	45			
BRANCH ASYLUM, AT UNIVERSITY GROUNDS, from 1st January to 31st December, 1857.					
Medical Department,	205	20			
Household Expenses [Food],	3463	85			
Clothing, &c.,	55	65			
Fuel, Light, Washing, and Cleaning,	890	36			
Insurance,	24	90			
Interments,	6	00			
Furniture,	51	78			
Farm,	80	85			
Incidentals,	44	19			
Repairs,	83	02			
Straw,	34	72			
Stationery,	27	25			
Water,	364	00			
Salaries and Wages,	1285	13			
	6796	90			
Balance in Bank of U. Canada,	2800	00			
	89923	46		89923	46

JAMES McKIRDY, Bursar.

MEDICAL NEWS.

The students of the Royal College of Surgeons, Dublin, have presented Dr. Mapother with a tea and coffee service and salver, in appreciation of his talents as a teacher.—An advertisement has appeared in the Lancet, notifying that "an M. D., with a practice of £800 a-year in the West end, aged 30, of good connexion and professional status, is desirous of being introduced to the daughter of a medical man, with a view to marriage and partnership."—The patrons of homœopathy in London and vicinity, including several noblemen of rank, dined together at the Goose and Gridiron, on All-Fool's day.—There are in the Zurich Lunatic Asylum 25 persons who have lost their reason through table turning and spirit rapping.—Male eggs are said to be distinguishable from female eggs by having wrinkles on their smaller end, while the female are equally smooth at both ends. M. Genin confirms this after 3 years' study.—Frogs are being used as an article of food by some of the lower classes of Lancashire.—*To keep rooms cool in summer:* Fill a flat vessel with water, and on it float branches of trees covered with green leaves. This is done much in Germany. The suspension of Indian matting, previously damped, at the open window, tends much to diminish the heat. The matting may be imitated by any kind of plaited grass.—Recent statistics have declared that in the 8 principal towns of Scotland, 8.5 per cent. of the births are illegitimate. This is the average, but the individual proportions are these: in Greenock, 4.6 per cent.; in Glasgow, 6.9; in Perth, 7.5; in Paisley, 7.9; in Edinburgh and Leith, 9.3; in Dundee, 9.6; while in Aberdeen the proportion was 19.5 per cent.—We regret to hear that Prof. Muller of Berlin has recently died, in the 56th year of his age. He was one of the brightest luminaries of science.—Late advices from Guatemala state that the cocchineal crop has been entirely destroyed; also that the government has offered premiums for the preservation and cultivation of the tree producing the balsam of tolu.—Dr. Rhuders, physician, has set to music the palpitations and irregular beatings of the heart of a female who is a patient in the hospital at Upsal. This disease, written in musical notes, with quavers and semi-quavers, forms a kind of waltz, and is one of the greatest curiosities of pathological science.—"Madam," said a doctor one day to the mother of a sweet, healthy babe, "the ladies have deputed me to inquire what you do to have such a happy, uniformly good child?" The mother mused for a moment over the strangeness of the question, and then replied, "Why, heaven has given me a healthy child, and I let it alone."—Garrick said of Sir John Hill, the physician and author, "The worst I wish the doctor is, that he may be compelled to take his own physic and read his own verses." "You must reverse the punishment," said a wag, "any man who takes the *doctor's* physic, *won't live* to read his rhymes."—*Brandy in a bad way:* Commercial intelligence from Paris states that "Brandies give no signs of life." If that is the case, brandy appears to be in danger of losing the title of *Eau de Vie*.—"I don't believe it's any use, this vaccination," said a Yankee. "I had a child vaccinated, and he fell out of the winder a week arter, and got killed."—A correspondent of a Picayune paper has such a cold in his head, that he can't wash his face without freezing the water.—This warning cypress flower is culled from a Cheltenham cemetery:—

> "Here lies I and my three daughters,
> Killed by a drinking of the Cheltenham waters;
> If we had stuck to Epsom salts,
> We'd not been a lying in these here vaults."