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Original Communications.

COHNHEIM'S THEORY OF TUMORS.

Translated and condensed from Vol. I. of his Vorlesungen Ueber allgemenie Pathologie (Lectures upon General Pathology).

By Dr. Osler.

Read before the Medico-Chirurgical Society of Montreal as an appendix to a report of two cases of rare Kidney Tumors—Striped-Muscle Sarcoma, and Spindle-celled Adeno-Sarcoma.

The nutrition disturbances which the organs and tissues of the body can undergo—up to the limit of actual necrosis—may be arranged in three groups. In the first the organ or tissues become smaller, but are otherwise unchanged (simple atrophy). In the second, there is a change in the chemical constitution of the part; fat exists, for example, where there should be albumen only, lime salts are in excess, or substances may occur such as amyloid, which normally are not found in the organism. In the third, the physiological proportion of individual organs is exceeded, or certain structures exist which do not conform to the normal anatomy. In this are classed the pathological regenerations, the hypertrophies, and the tumours. In these processes there is a change in the physiological balance between waste and nutrition in favor of the latter, by which means alone a definite increase of tissue could take place.

Naturally, during the whole period of physiological growth, this is a law of the organism.

The ultimate and essential cause of all growth depends on the organization of the species—hereditary, or, as they might be called, historical causes, in consequence of which the body and its organs, in each individual species, develop to a typical form and size, requiring a definite period of time for the whole body, and a variable period for the different organs, some of which attain their full development much earlier than others—the thyrmus, for example, at the second year, the genitals at puberty. In the history of these latter organs the most striking example is afforded of the influence of the original tendency on the physiological growth of the body. On no other ground can it be that the genitals during childhood remain undeveloped, to begin at puberty a rapid and increased growth, which in comparison with that of childhood is abnormal, and is not regarded as such simply because, according to the type of our organization, the child-like growth is only normal for a definite period. But in the same organs a much more marked instance of (abnormal) growth, dependent on inherent tendency, is afforded by the enlargement of the pregnant uterus. The cause of this cannot be regarded as due to the increased blood-flow, for muscle fibres do not grow unless they are stimulated, *i. e.*, work,—as, for example, the muscles of the stomach or bladder when there is any unusual resistance to be overcome. The hypertrophy of the uterus can in no way be compared with this latter form of growth, but only with the enlargement which all parts of the body undergo during the period of development, that is to say, in consequence of an inherent tendency in the germ of mammalia, the uterus, under certain conditions, namely impregnation, grows beyond its normal size.

The explanation of the occurrence of monsters, *per excessum*, is to be sought for in some abnormality in the embryonal plan. In such cases the abnormality is congenital, but there are instances of abnormal growth, *post partum*, which must also be referred to embryonic influences. In the case of giants, some are born as

unusually large children, others of ordinary size, the excessive growth not beginning until months or years after birth; but in either case, though we know too little of the details of the growth in the individual tissues to say wherein lies the error in design, yet it must be in peculiarities of embryonic constitution. The instances of excessive development, both before and after birth, of one or more extremities, of which there are several examples, must depend on the same cause.

Probably all pathologists agree that in the above-mentioned cases, embryonic tendencies alone afford a suitable explanation. Prof. Cohnheim, however, would apply this view over a much more extensive, and, in some respects, important territory—viz., the pathological new formations. From these he excludes on the one hand the retention tumors, such as cysts, &c., and on the other, the infection tumors, resulting from syphilis, tuberculosis, lupus, &c. He adopts Virchow's classification :— I. Tumors constructed on the type of the connective tissues, such as fibromata, lipomata, chondromata, angiomata, lymphomata, sarcomata, &c. II. Such as correspond to the epithelial type—epitheliomata, adenomata, carcinomas. III. The type of muscle tissue—myomas, smooth and striped. IV. The type of nerve tissue—neuroma. Veratoma, in which entire histological systems may be represented, skin, hair, teeth, bone, &c., as in the dermoid cysts. In framing a definition of a tumor, to exclude simple hypertrophies of tissues, such as fatty tissue in obesity, or bone in exostosis, stress must be laid upon the fact that these do not conform to the anatomical type of the part. Thus in a hypertrophy of the uterus in consequence of defective involution, or chronic metritis, the typical form of the organ is maintained, but not so in the fibro-myoma. In hypertrophy of stratified epithelium the normal arrangement is maintained, while the thickness of the layer is increased, whereas the epithelial growth of a carcinoma is highly irregular. The *atypical* nature is a significant, nay indispensable, criterion of every true tumor, no matter what its histological structure may be. Still, even this will not suffice, as a glance at the history of inflammation will show, for what can be more atypical than a fresh bony

callus after a fracture, a pleuritic or peritoneal adhesion, or a fibroid patch in the heart muscle ?—all which are new formations in the strictest sense of the term. Something more is needed to separate these from the true tumors, and that is to be found in the etiology alone.

Among the hypotheses which have been advanced to explain the origin of tumors that of mechanical irritation, traumatism, has played an important part, and the number of cases is considerable in which a locality, the seat of a new growth, had been injured. Böll, in 344 cases operated upon in Langenbeck's Clinic, was able to trace a traumatic origin in 42, *i. e.*, about 12 per cent., and about the same percentage was found in the 574 cases treated in the Charité Clinic during the past ten years; that is to say, in 86 per cent. of all cases, in which special attention was directed to this subject, no trace of traumatic origin could be ascertained! Cohnheim concludes that hypertrophy and inflammatory products may follow traumatism; true tumors never. The view of the infectious origin by means of a virus has been supported by some writers, but experiments have shown that cancer is not communicable from animal to animal, or from man to man.

The embryonic predisposition (or design) affords by far the most plausible explanation, and has already been urged by certain pathologists in the case of the dermoid cysts, but not for tumors in general. Cohnheim states his theory in the following terms: The simplest way of representing the matter is to suppose that at an early stage of development more cells are produced than are necessary for the construction of the affected part, so that a cell mass remains unused, probably of extremely limited dimensions, but, on account of its embryonal nature, of very great productive activity. The period of this superfluous production of cells must be placed very early, possibly between the differentiation of the germinal layers and the complete formation of the ground-work of the individual organs; at least, so it seems best conceivable why from the error, not a general hypertrophy of a part takes place, but only a tumor—an excessive growth of one of the tissues of the part.

On account of our present very imperfect knowledge of the details of early embryonal growth, we can only deal in suppositions such as these. The main point is that the essential cause of the growth of tumors is an error or irregularity in the embryonic construction. Positive proof of this is, in the nature of things, not forthcoming, but a whole series of facts may be brought forward in its favor. Thus, for example, the hereditary nature of many growths—carcinoma, osteoma, lipoma, &c., which have appeared in several generations in the same family, and more frequently inherited from the mother than the father. Cases are on record of the tumor being confined to one organ—as the breast—through several generations, or not to a definite locality, but to a histological system, so that in several successive generations one member of the family has had an enchondroma of the pelvis, another of the humerus, a third of the femur, &c. This view is further supported by the congenital appearance of tumors. The teratoma are very frequently congenital, and other forms are by no means rare, such as fatty and fibroid tumors, and enchondromas, carcinomas and adenomas have also been met with. It is not, however, in the majority of cases the tumor which is congenital, but the predisposition thereto—*i. e.*, there exists a superfluous mass of cells out of which a new growth can develop. We do not know what it is which gives the impulse to these germs, causing them to increase and multiply; nor do we know why their development is checked or restrained. Perhaps it is the resistance of the normal tissues, and this may afford an explanation of those cases in which a growth has followed an injury, which may be supposed to have weakened the physiological resistance of the surrounding tissues.

It is a well known fact that certain epithelial tumors, cancroids and carcinomas, have a special preference for the orifices of the body, the lips and tongue, alæ of nose, eyelids, prepuce, glans and rectum; also, very frequently the external os uteri, and in the œsophagus the spot corresponding to the fork of the bronchi. The existence of these predilection spots has been urged strongly in favor of the part played by mechanical insult in the etiology of tumors, but if this were the case,

how much more common should new formations be in the hands and feet, the parts above all others most subject to injuries. The reason of this special predilection is to be sought in quite another circumstance. All the above-mentioned regions are places in which during development a certain complication has occurred. At the various orifices a folding in of the outer germinal layer, and a union of it with the internal layer has taken place, during which a slight irregularity might very easily occur, resulting in the inclusion of a few superfluous cells—the germs of a future tumor. The situation of œsophageal epithelioma opposite the bifurcation of the trachea is best explained, not by supposing that here there is greater pressure against the bronchi, but because this is the point where the original trachea and and œsophagus were in connection with each other, and at which a developmental complication could very readily take place. In the rectum, further, it is not the orifice, the anus, where cancroid develops, as one might expect on the traumatic theory, but a point further in, where the epithelial tube of the rectum has united with the involution of the outer layer. So also in the female generative apparatus, it is not the vulva which is the chosen seat of the cancer, but the external os, the very spot at which in an early period of development the squameous epithelium of the sinus urogenitalis has united with the cylindrical epithelium of Müller's duct.

Other tumors besides cancers have special localities which they affect. Thus the greater portion of all smooth myomas occur in the uterus. How is it that this rare form so frequently develops in this organ? Simply because in every uterus germs exist which normally grow only under the physiological stimulation of impregnation, but which, occasionally, under other than physiological stimuli, develop in an irregular, atypical manner.

So also with the myoma or adeno-myoma of the prostate, the so-called hypertrophy, but which is in reality a true tumor. In this organ there is no physiological disposition to exceptional growth, and traumatism has probably nothing to do with it; but a consideration of its development points to the same cause as noted for the os uteri—the prostrate develops at the point

of junction of Müllers duct, with the sinus urogenitalis, a locality in which the developmental processes are in the highest degree complicated.

The heterologous tumors, those which deviate in their structure from the native soil in which they grow, afford a very strong support to this theory. Without it we must conclude that, contrary to all laws of physiological growth, there may rapidly develop, out of gland tissue, cartilage; out of connective tissue, epithelium; out of kidney substance, striped muscle; out of lung tissue, bone. What is very peculiar, all these tumors maintain a remarkable uniformity in relation to locality. Thus the enchondromas of bone never originate in the cartilaginous regions, but always out of the fully ossified parts, taking their origin from tiny embryonal cartilaginous remnants, which have not been used, and which remain within the bony tissue. The germs of the enchondroma of the parotid region represent particles of the original cartilage matrix, which have remained unemployed. The majority of dermoid cysts occur either sub-cutaneously in the region of the face and neck, or else in the testicles or ovaries. Their frequency in the first situation may be explained, as suggested by Lücke, by the complicated processes which go on in the formation of the face and neck. The intimate relation of the wolfian body, which represents the original genito-urinary organ, with the external layer on the one hand, and the middle layer on the other, makes it easy to understand how it is that in these organs dermoid, muscle and osseous tumors so readily develop. A very slight error in the separation of cells from the outer layer, from which the skin is formed would suffice to include germs of a dermoid cyst, and from the middle layer, from which muscle, cartilage and bone develop, to furnish germs of myomas, enchondromas and osteomas. This theory also explains satisfactorily the atypical nature of these growths, their deviation from the morphological type of the locality, for the germs from which they originate being superfluous, are not taken into account in the formation of the parts, so that when they do develop, it cannot be in any other than an atypical way. When the germs are a superfluous pro-

duct from the cells of an equivalent tissue, the tumor corresponds histologically with the base in which it grows; for example, a lipoma, which has resulted from the growth of superfluous germs affects cells in the sub-cutaneous tissue.

One of the most interesting features in tumors, and one which strongly supports this theory, is the fact that certain of them are made up of tissues, embryonal in character, and having no counterpart in the adult body. This is particularly the case in myxomas and sarcomas. The former tumors are composed of a gelatinous, translucent, mucoid mass, in which is embedded a larger or smaller number of round and spindle-shaped cells. Such a tissue is unknown in the adult body, unless perhaps in the vitreous humour, but in the embryo it is a normal precursor of certain of the connective tissues. When in the thigh of an adult a large sub-cutaneous myxoma is found, shall we believe that here the cells of the sub-cutaneous tissue and fat have produced a tissue of specially embryonal nature, and from the material supplied to them from the blood have formed, not cologen and fat, as is their wont, but mucus? Or is it not more reasonable to suppose that the germs have originated at such a period of embryonal life when it is the physiological function of the cells to produce a mucoid tissue. So also with the sarcomas, that remarkable group of tumors defined by Virchow as new growths of connective tissue with a preponderance of cellular elements. We must go far back in embryonic life to find the histological prototype of a round or spindle celled sarcom. Only in the very early stage of the formation of the connective tissue organs do we find them composed of closely-packed cells with but little intercellular substance. Where the cells of a dura mater, of a fascia, or of loose connective tissue produce a primitive and in the highest degree embryonal tissue, is it not again preferable to suppose such originates from superfluous, unemployed germs of an exceeding early date, which have remained included in the tissues?

A tumor, then, may be defined to be an atypical new-formation of embryonic constitution. Tumors have a direct relationship with the so-called mal-formations, forming in reality a sub-

division of the *monstra per excessum*, of which forms the greater number, unlike the tumors, are congenital, only a few developing later in life.

Relation of Tumors to Hypertrophies.—The etiological conception can alone afford that sharp boundary between hypertrophy and inflammation on the one hand, and new growths on the other, which the instinct and unbiassed judgment of physicians have repeatedly demanded and exact research as often effaced. How little in reality the anatomical stand-point suffices for the elucidation of this process is amply shown by the example of a well-known and simple growth, viz., goître. According to the pathologies this is an enlargement of the thyroid body caused by an homologous tissue growth, which sometimes involves the entire organ, sometimes one lobe, or the part of a lobe; in individual cases accompanied with exophthalmos and hypertrophy of the heart, arises epidemically from miasmatic causes, and without such, sporadically, sometimes diminishes spontaneously or with the use of iodine. An entirely different view is afforded when etiological principles are employed. The thyroid enlarges, grows beyond its physiological mass, when the arterial blood flow is for a long time abnormally increased; this happens in Basedow's disease, very probably on account of adilator neurosis; in other cases under the influence of a local, and as yet unknown, miasm. What occurs under these conditions is an hypertrophy of the thyroid, which disappears when the cause is removed. Totally different from this is the abnormal growth in consequence of superfluous embryonal germs. What results in this case is also thyroid tissue, which may undergo colloid change, like the hypertrophic variety, but it presents itself in the form of an atypical mass, a true strumous tumor, which is independent of locality or miasm, never is cured with iodine, nor accompanied with exophthalmos. In the former the whole gland is always (in Cohnheim's experience) involved; the latter—the true tumors—occur in the form of atypical masses, so that there is an anatomical criterion which renders it possible to distinguish these forms. Microscopically it would be as fruitless to attempt to distinguish between a miasmatic goître and a true strumous tumor as between a lipoma and polysarcia.

Still more instructive is the history of the lymph-gland hypertrophies and growths. There groups can be determined (1.) the simple indurative enlargement, in consequence of chronic catarrhal and other inflammations; and also the proper lymphoma, occurring in the form of a more or less hard gland hypertrophy, which neither suppurates nor becomes caseous, arising without previous inflammation in neighbouring mucous membranes, and situated chiefly in the neck; (2) a number of forms of gland-hypertrophies, more or less extensively distributed over the lymphatic system,—such are the leukæmic, the scrofulous, and the tuberculous swellings; (3) the lympho-sarcoms. From these varieties the scrofulous gland hypertrophy alone is anatomically characterized and distinct from the others by the caseation pathognomonic of it. But who, on account of the remarkable similarity of a leukæmic with a lympho-sarcomatous gland, or a common lymphoma, would identify all these processes with each other, in spite of the total dissimilarity in the constitution of the blood, and in spite of the varied course. The etiological conception brings perfect clearness into this confusion. There can be distinguished (1) an inflammatory hyperplasia—analogous to a periosteal, peritoneal or pleural thickening—the indurative lymphatic swelling; (2) infectious hyperplasias, to which certainly belong the scrofulous tumors, and probably also the leukæmie—*i. e.*, if leukœmia is an infectious disease, in any case, we have to deal with a general disease, excited by an unknown agent; (3) enlargements dependent on embryonic predisposition, the true tumors of these glands, the lympho-sarcomas and the lymphomas, which stand in the relation to each other of malignant and benign growths.

The etiology alone enables us to make a scientific separation of the true tumors from inflammatory products. In consequence of a periostitis bone may be formed, fibrous connective tissue in consequence of an inflammation, and also stratified epithelium may be abundantly produced from the same cause. Are we, therefore, to conclude that wherever a new formation of these tissues is met with, there has been a previous inflammatory process? Far from it. But wherein shall one distinguish a

bony, fibrous, or epithelial growth from a product of inflammation of the same histological characters? Not by the atypical form, for the most spinous exostosis is not more atypical than the callous needles which often form in the healing of a splintered fracture, and a cutaneous horn is not more atypical than a pointed condyloma. One may examine the respective objects with the most extreme care, macroscopically, microscopically, and even chemically, and the etiology remains, the only distinguishing characteristic. When a leg becomes enormously enlarged, elephantiac, in consequence of repeated inflammation of the skin and lymph vessels, it remains an inflammatory product. An elephantiasis of the scrotum or nympha, on the other hand, coming on without inflammation, either hereditary or even congenital, *i. e.*, in consequence of some peculiarity of race, is a tumor. A true neuroma is a tumor consisting of nerve fibres, which has formed either singly or in numbers along a nerve, but when at the stump of an amputated nerve, in accordance with the principle of nerve regeneration, a mass develops out of the old fibres and forms an inextricable coil, it is not, in spite of its atypical form, a true tumor.

(*Conclusion in Next Number.*)

RESPONSIBILITY AND IRRESPONSILITY

IN CRIME AND INSANITY;

A PAPER READ BEFORE THE MONTREAL MEDICO-CHIRURGICAL SOCIETY,

BY THE PRESIDENT,

HENRY HOWARD, M.D., M.R.C.S., ENG.,

[FEBRUARY 7TH, 1879.]

MR. CHAIRMAN AND GENTLEMEN,—Never since the history of literature, has there been so much written upon mental science and mental diseases as in the present day, and these writings are not by the rank and file of the profession, but by the officers. To name all would occupy too much of your time. I would, however, give the names of Maudsley, Clouston, Hach, Tuke, Savage, Bucknell, Creichton Browne, Ferrier, Hughlings

Jackson, Brown Sequard, Eulenburg, Guttman, W. W. Ireland, and there are a host of French writers, besides the men outside of the profession, such as Emel, Du Bois, Reymond, Tyndall, &c.; yet, gentlemen, strange to say, perhaps there never was a time when mental diseases were so little known to, or studied by the medical practitioner. The reason is obvious. As civilization advanced, and science showed insanity to be disease, the treatment of the insane became more humane, and instead of this class being allowed to wander as outcasts about the country, asylums have been provided for those suffering from mental and neuralgic diseases, such as epilepsy, as well as for the imbecile and idiot. No one will deny but this is as it should be; but it has taken away all chance from the medical student and medical man of clinical study of the insane, as well as the study of the pathological ravages made by disease on man's nervous system. Generally speaking, for many very obvious reasons our insane asylums are too far from our cities to give medical students clinical instruction. Again, our asylums are such that a crowd of medical students would derange the whole establishment, and be injurious to the patients. Again, the medical officer of an asylum—for example, myself, as at present situated,—would have no time to give clinical instruction. Now, gentlemen, I have often thought of this anomalous position of medical men, particularly since the late Order in Council in this Province—a very necessary order—compelling medical men, when giving certificates of insanity, to make a solemn affirmation to their certificates before a magistrate. If you knew as much, gentlemen, as I do, you would see how necessary that Order in Council was. Well, I have, as I have said, often thought of this your position, and as to how it could be remedied, so as that your medical students could get clinical instruction on mental diseases. My idea is that if you made arrangements in your hospital, say for four or six patients, one-half male, the other half female, that, by petition, the Provincial Government could be got to consent to allow me, or who ever takes my place after me, to transfer, from time to time, patients from the asylum, for clinical purposes, to your hospital. I do not mean to enter into details,

but merely to point out to you that something might be done. If representatives from the medical schools would wish to speak to me on the subject, I shall be most happy to enter into further details. I am convinced, gentlemen, that something should be done, by which the general medical practitioner should have more knowledge than he now possesses of mental diseases.

Dr. Maudsley, speaking of the duty of the physician, says: "Recognizing the obvious difference between him who *will not* and him who *cannot* fulfil the claims of the law, it is their function to point out the conditions of disease which constitute incapacity."

Gentlemen, I am going to ask you to join with me to do that which Dr. Maudsley says it is our duty to do, therefore I will offer no apology for occupying a short portion of your time this evening in considering a question which I have brought, in one form or another, before you very frequently within the last four years. The Dominion Parliament is now about to assemble, therefore it is a proper time for this representative society to express its views, and ask for legislation to define the responsibility or irresponsibility of the criminal; to ask the legislature to define, on some scientific ground, where responsibility ends and where irresponsibility begins. That society has a right to make laws for its own preservation, is a truth that no sane man can deny, but, that these laws should be based upon justice and benevolence is just as great a truth, which no sane man can deny. From the earliest history of law-makers down to the present day, we find that as mankind has progressed in scientific knowledge,—in fact, as man's intellectual and moral faculties have become more developed, and man, in consequence, has progressed to a higher state of civilization, laws have been more generally based upon justice and benevolence. But, gentlemen, man is, as I have already said, a progressive animal; all history, and science (which is more trustworthy), proves this fact. When we draw the difference between the peoples of the pre-historic age, and the peoples of the present day; when we draw the distinction between the peoples of the historic age and the present day; or, to come still closer, between the peoples of the

present day,—for example, between the European and the African, between the European and the Cannibals of the South Sea Islands,—we must admit that man is a progressive animal. Perhaps, gentlemen, in some millions of years the descendants of these Africans and South Sea Islanders may become, by the natural law of progress, as far advanced as we are now, and our offspring may be so far advanced that crime and insanity would be unknown amongst them. Judging from the past, this is but a natural conclusion to come to with regard to the future. Not, however, being a prophet, nor the son of a prophet, I do not want to speak of the future, but of the present. I want to speak of man just as we medical scientists find him; and how do we find him? We find him differing as much in his mental organization—that is, in his intellectual and moral faculties,—as we find him differing in personal appearance. All men recognize the fact of men differing in their intellectual faculties from the different degrees of idiocy, different degrees of imbecility, and different degrees of intelligence; and society, as a whole, makes no protest when science points out the fact that this intellectual faculty, whether it be or be not cultivated, is dependent upon a man's material brain. But the moment we come to declare the same of the other portion of a man's mental organization—that is, of his moral faculties,—then all the teachers of religion, and all those versed in law, raise one universal cry against us, and we hear on all sides the terms revolutionists and materialists. Nevertheless, gentlemen, it is as true of the moral faculties as it is of the intellectual, and, as you know, admits of as clear anatomical, physiological and pathological proofs. Yet, I admit that all scientific truths are of themselves revolutionary, but they produce a revolution very much to be desired, a revolution that advances civilization; it is, in fact, a daily revolution, going on so gradually and so noiselessly that men hardly observe it; indeed, they do not observe it at all in its growth, and are surprised to find themselves compelled to admit the truth of a scientific fact that they had never dreamt of. As to its being materialistic, of course it is. The mental scientist don't pretend

to treat of anything else but matter; we see effect and we look for cause; we see that men differ intellectually, and we find the cause in the cortical substance of the frontal portion of the hemispheres of the brain. We find men differ morally, and we find the cause in the cortical substance of the parietal and occipital portions of the hemispheres of the brain. We find that irritation of the frontal cells, renders the most intellectual man a raving maniac; that irritation of the parietal cells, renders the most honest man a pick-pocket; and that irritation of the cerebral cells, renders the most pure being a filthy, impure creature. Now, if these be facts, and facts they are, we have no trouble in recognizing another fact, and that is, that every man, in virtue of some abnormal state of his moral faculties, has in him a criminal neurosis,—some to a greater, and some to a less degree. Just as men differ in degrees of intelligence, so they differ in degrees of morality. These are most reasonable, simple facts, gentlemen; nothing contrary to our reason, nothing contrary to our comprehension, nothing contrary to natural laws; indeed, I conceive one of the great difficulties in the way of men receiving these scientific truths is their simplicity. There is something yet remaining in man that makes him like the mysterious and cling to the inexplicable. Writers of fiction know this well, therefore they always write so as to mystify their readers. This abnormal state of man's moral faculties, which mental scientists call a criminal neurosis, and which we account for physically, others call by the terms, his sinful nature, his criminal nature, his rebellious nature, &c., and the cause they assign for it is the consequence of original sin. Well, I see here no cause of quarrel; all admit that the evil is there, and what was the first or original cause of this unhappy state of man is of but little consequence so long as we recognize the fact that man's criminal neurosis, as he is to-day, is due to a physical cause, and that cause is an abnormal or imperfect state of his moral faculties; whether his soul has anything to do with the matter or not is of no consequence to us so long as we treat the disease physically. But, say our law-makers, our lawyers, and our religious teachers, every man must be held responsible

for his acts. The scientist here joins issue and says every man must be held responsible to a degree, his degree of responsibility depending upon his degree of intellectual and moral faculties and his degree of controlling nerve power. The idiot, imbecile, maniac, and morally insane are not responsible at all, and the criminal's responsibility must be judged by the greater or lesser degree of his moral faculties, the degree of his criminal neurosis, and there are some of the criminal class of society whose neurosis is so exaggerated, so incurable, that they are not a bit more responsible than are the morally insane; the habitual drunkard, for example. And here I consider the best time to define for you the difference between moral insanity and what is understood, or what I call a criminal neurosis, or, if you will, moral depravity. I would define moral insanity to be where a man has had a sound moral organization and sufficient nerve control to guide his moral acts, and where by reason of disease or some accidental circumstances, either from reflex action, from functional derangement, or lesion of the parts, or disease of the vascular system, &c., his mental faculties become altogether changed, and he loses power over his moral acts from the loss of nerve control. This man's will may be to do right, but he has no nerve controlling power to resist his impulse; and sometimes, to prevent himself committing a crime, he will commit suicide, choosing, as he conceives, of two evils the least. This is what I call moral insanity, and in such a case the intellect may be unclouded, and the miserable unfortunate know well that he is no longer a moral, but an immoral man; and he is a most miserable man, always accusing himself, although he knows he cannot help himself. Yet, by our inhuman and unscientific laws, such men are hanged, that is, judicially murdered; and the righteous man whose moral faculties are sound, and whose moral faculties are like an iceberg, says: "Serves him right; moral insanity, indeed! hang all such rascals; these doctors and scientists, by and by, will do away with all responsibility."

I will now define what I mean by a criminal neurosis. I have said that every man has it more or less, but some have so much

of it that they are hardly responsible for their acts. These are they that are begotten, conceived, born and brought up in crime, generally the offspring of depraved and debauched parents. They differ from the morally insane, inasmuch as they never had a sound, moral organization; their moral organization from their birth has been deformed; they never knew good; evil to them is good. They are as incapable of reasoning as a wild horse; they cannot recognize the rights of society; they are Ishmaelites—their hand is against every man. If they have controlling nerve power, they don't know how to use it, or if they do, they use it for their own vile ends. These men never regret an evil deed, because they see no evil in their act. They are a law unto themselves. They are only in a very slight degree removed from the lowest brute, either intellectually or morally. And these men we punish by hanging and whipping, &c. We treat them also as responsible beings, and still crime goes on, and the criminals still live in our midst. Then the righteous say: "Well, if he had listened to the voice of God, if he had listened to the teachings of religion, if he had controlled his evil desires, his evil passions, &c., he would have been a different man." Of course he would, but he didn't; he had no desire to do so. He acted exactly in accordance with his nature; he acted in obedience to his criminal neurosis, in obedience to his abnormal moral faculties; and for all the example it is to another of his sort, we might just as well hang a dog as hang such a criminal.

Gentlemen, you know, and I know, and all the world knows, that the only remedy that has been ever tried for the prevention of crime has been punishment, and this punishment has been meted out to all as if all were equally responsible for their acts. This, to say the least, was unscientific, and consequently unjust, and punishment, gentlemen, has been proved a failure for the prevention of crime, or for the cure of the criminal class of society. Crime continues, and the criminal classes continue.

There is no man recognizes more than I do, as I have already said, the right of society to enact laws for its own preservation. Moreover, I fully recognize the right of society to inflict pun-

ishment, even capital punishment, for crime if it thinks well so to do; but I deny the right of society to treat all criminals as if all were equally responsible, or as if all were to some degree responsible. If punishment has to continue, and I suppose it will, for the present at all events, I would have men punished, not according to the enormity of their crimes, but in accordance with the moral responsibility with which they have been endowed; and where I found an irreclaimable, an incurable criminal, I would treat him as I would an incurable maniac, and lock him up for life, not for punishment, but for the protection of society, and to put a stop to the procreation of such animals.

What next would I have? I would have the Legislature recognize the fact that poverty was the great *objective* cause of crime, and that if we must of necessity have different grades of society, if we must of necessity have poor, we must not of necessity have a pauper class, from which class, as a rule, springs the criminal classes. I would have the Legislature bend their whole energy to do away with pauperism, and thereby diminish crime and the criminal classes. But you will ask, how is the law to draw the distinction between the men of different mental organizations? How is a judge, before he passes sentence, to know a man's mental callibre or a man's moral faculties? Let the law once be made and the medical profession will soon provide men capable of doing that work. But we need not trouble ourselves too much about the question of criminals at present. There is not much prospect of the Legislatures of the present day troubling themselves about the matter. Such questions as these are rarely taken up by men of strong party proclivities. Besides we would have a strong power against us, the theologians and lawyers. You will naturally ask why, then, am I writing so much upon the subject? I answer, some men lay only the foundation; other men build thereon. I hope that in time these other men will appear and build upon the foundation that I have been trying to lay. But if I have no hope to get legislation upon the criminal class of society, I have strong hope of having legislation upon the question of insanity, if for no other reason than to put a stop to our judges making themselves ridiculous before

the whole world, in their different definitions of what causes irresponsibility in the insane. Could there be anything more absurd than to find a Judge in the Province of New Brunswick making a statement the very contrary of that made a few months before by "the Lord Chief Justice of England, "the Judge instructed the jury that unless there was an entire lack of knowledge to distinguish between *right* and *wrong*, they could not but find the prisoner guilty," the Lord Chief Justice of England said: "I coincide most cordially in the proposed alteration of the law, having been always strongly of opinion that, as the pathology of insanity abundantly establishes, there are forms of mental disease in which, though the patient is quite *aware* he is about to do *wrong*, the will becomes overpowered by the force of irresistible impulse." Here, gentlemen, is a difference, but is the Provincial Judge to be found fault with? I certainly think not; the fault lies with the Dominion Government for never having defined where responsibility terminated. I will now, for your information, and in support of my views, given before this Society three years ago, and for the information of our Legislature, quote the highest authority in England, both legal and medical. In *The Journal of Mental Science* (edited by Drs. Mandsley and Clouston) for April, 1878, page 22, is the following from the pen of David Nicolson, M. D., Deputy Superintendent State Criminal Lunatic Asylum, Broadmoor, England, "a bill introduced into the House of Commons in 1874, by Mr. Russell Gurney, with the view of amending the Law of Homacide led to the appointment of a committee, before which most important and hopeful evidence was given. The following evidence of Lord Justice Blackburn speaks for itself, and virtually displaces the legal dictum of right and wrong," "We cannot fail to see that there are cases where the person is not clearly responsible, and yet knows right from wrong. I can give you an instance. It was in the case of that woman of whom I was speaking, who was tried for wounding a girl with intent to murder. The facts were these: The woman had more than once been insane, the insanity being

principally brought on by suckling her child too long, which was the cause that had produced it before. She was living with her husband, and had the charge of this girl, of about fifteen, who lay in bed all day; she was very kind to her, and had treated her very well; they were miserably poor, and very much owing to that, she continued to nurse her boy till he was nearly two years old; and suddenly, when in this state, she, one morning, about eleven o'clock, went to the child lying in bed, aged fifteen, and deliberately cut her throat; then she went towards her own child, a girl of five or six years of age, of whom she was exceedingly fond, and the girl hearing a noise, looked up and said: "What are you doing?" "I have "killed Olivia, and I am going to kill you," was the answer. The child, fortunately, instead of screaming, threw her arms round her mother's neck and said: "No, I know you would not hurt your little Mopsy." The woman dropped the child, went down and told a neighbour what she had done, that she "had killed Olivia, and was going to kill Mary; but when the darling threw its arms round my neck, I had not the heart to do it." She clearly knew right from wrong, and knew the character of her act. For some little time after that she talked rationally enough, but before night she was sent to a lunatic asylum raving mad, and having recovered she was brought to be tried before me at a subsequent Assize. She did know the quality of her act, and was quite aware of what she had done, but I felt it impossible to say she should be punished. If I had read the deposition in Magnantin's case, and said: "Do you bring her within that?" the jury would have taken the bit in their own teeth, and said, "Not guilty on the ground of insanity," and I think rightly. She is well borne out by the following extract made from a statement sent to the Committee by the Lord Chief Justice of England (Sir A. Cockburn): "As the law as expounded by the Judges in the House of Lords now stands, it is only when mental diseases produce incapacity to distinguish between right and wrong that immunity from the penal consequences of crime is admitted. The present bill introduces a new element, the absence of power of self denial. I concur

most cordially in the proposed alteration of the law, having been always strongly of opinion that, as the pathology of insanity abundantly establishes, there are forms of mental disease in which, though the patient is quite aware he is about to do wrong, the will becomes overpowered by the force of irresistible impulse, the power of self control when destroyed, or suspended, by mental disease becomes, I think, an essential element of responsibility."

In the July number of the same journal (1875), page 258, is the following from the pen of Dr. Bucknill: "Responsibility depends upon power and not upon knowledge and feeling, and a man is responsible to do that which he *can* do; not that which he feels, or knows it right to do."

Well, gentlemen, no matter how you, or others, may differ with me respecting a criminal neurosis, and that a man's moral responsibility depends upon his mental organization, there are none of you, with such authority on my side as I have quoted for you, but will agree with me, that it is full time for us to have legislation upon responsibility in the insane. And that law should decide, as it has in England, that a person may know the difference between right and wrong, and yet be irresponsible for their acts, their will being overpowered, and their self control destroyed by the force of irrisistible impulse. Yes, it surely is time that this important question should be settled; it is time that the law should define where irresponsibility ends, and responsibility begins.

I have brought this evening, before you three distinct subjects for consideration. The first, as to how the Medical Schools shall provide means to give students clinical instructions upon mental diseases. Well, gentlemen, if your different Professors will come to some understanding amongst themselves, I will be happy to aid you in carrying out your plans. The second subject is with regard to the criminal class of society; strong as my convictions are upon the unscientific treatment of this class of society, I would not ask you to take any move in the matter at present. There are too strong prejudices to overcome; better wait till the people are better instructed in science, press-

ing the question at present would do more harm than good, at least that is my opinion. But with regard to the third subject, viz., to urge upon the Legislature the necessity of legislating on the subject of responsibility and irresponsibility in the insane. I ask you if you agree with me, that we require such legislation, to prepare petitions to the Legislature praying for legislation, and setting forth the reasons why our prayer should be acceded to. In fact that the law should be, "that a man is responsible for what he *can* do, not for that which he feels, or knows, it right to do." Or, gentlemen, if you see any more simple way to bring the matter before the Legislature, do so; but do something, if it were only to show, as scientists, we are alive to the necessity of some change being made in the law of lunacy.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Case of Compound Comminuted Fracture of Leg.—Amputation with Antiseptic precautions.—Recovery.—Under the care of DR. RODDICK.

(Reported by Mr. J. A. MCARTHUR.)

J. O. M., laborer, æt 22, a strong healthy young man of good physique, was admitted into the Montreal General Hospital, Oct. 8th., 1878, with compound, comminuted fracture of left leg, the result of direct violence. His family and personal history are good.

The history of the accident is briefly as follows:—

In the afternoon of above date the patient, with others, was engaged on ship board, hoisting a heavy plate from the hold of a steamer. It appears that when elevated about ten feet above patient's head, the chain sling attached to the plate lost its catch, the latter fell suddenly to the floor before sufficient time was given to get out of its way; and, from the nature of the accident, probably struck the limb directly with its edge.

On examination, (one hour after occurrence of accident) the

left leg is found crushed to a fearful extent, especially at a point corresponding to the lower part of middle third. Here a large area of surface is broken on either side, the soft parts greatly contused and lacerated, and the bones badly comminuted. Distal part of limb is cold and pulseless and freely movable in any direction. Tibia is broken into five or six small irregular pieces partly or wholly denuded of periosteum. The fibula is fractured at two points, probably about four inches from either extremity, the lower one being compound, the upper one not so, but isolated, as it were, from the common site of injury. He feels weak, and depressed; is slightly feverish; temp. 99·5° in axilla; pulse 85, small and soft; hemorrhage not over great.

At 5.30 P. M.. ether was given, and Dr. Roddick, assisted by the house surgeons, proceeded to remove the limb, Lister's antiseptic method being carried out to its fullest extent. The site chosen for amputation was a point about six inches below the knee, in close proximity to the lacerated parts, and within half an inch of the upper fibular fracture. The method adopted was a modified flap, the anterior flap made long by dissection, the posterior, short, and by transfixion. Esmarch's band was used to control hemorrhage. There was considerable difficulty in securing the vessels, and stopping primary oozing from the stump. The flaps were secured by catgut sutures, and the whole carefully inclosed in the Antiseptic Dressing.

9 P. M.—The patient is weak and depressed. Temp. 101°. Pulse, 92; suffers considerable pain; no inclination to sleep.

Oct. 9th., 12.30 P. M.—Passed a restless night; much pain in stump; morning, temp. 99°; everything looking nicely, and a fresh dressing applied.

10th.—Spent a fairly good night. Not much pain. Temp. 101°. Dressings are quite sweet. Stump looks well. A little oozing, chiefly serous. No inflammatory tension, dressed as before.

13th.—Spent a good night; feels comfortable, and is cheerful; temperature 100°; stump dressed as usual; looks very well; union seems to be progressing favorably; discharge

altogether serous; no bagging of pus, or tension anywhere; no signs of lymphatic trouble. Bowels only moved once since operation; ordered a mild aperient.

19*th.*—No serious symptoms have arisen; temperature running an almost uniformly normal course; digestive system not disordered. Stump looks very well; union has taken place between the flaps. Some superficial sloughing of anterior flap, but the granulations are healthy and vascular; posterior flap a little baggy, but the dressings are perfectly sweet; salicylic cream is now used.

22*nd.*—No change worth noting since last report. A little pus can be squeezed out, which, however, is antiseptic, as shewn by absence of odour, and by the microscope.

27*th.*—Dressed again to-day; stump in admirable condition; parts entirely closed throughout; no signs of tension or bagging anywhere; external surface is pretty raw, from superficial excoriation of the integument; temperature varies from 98 to 99°. Digestive system in good order.

29*th.*—(21st day). Ordered up. Antiseptic dressings discontinued and red wash applied.

Nov. 4*th.*—Has been going about in the sick chair; stump presents a fine healthy appearance; firm union of all the parts; cicatrix situated well behind. End of stump round, uniform and nicely healed over. Discharged.

Case of Malignant Epulis, demanding partial removal of the Superior Maxillary Bones.—Recovery.—Under the care of Dr. RODDICK.

(Reported by Mr. Thomas Gray.)

E. Z., aged 52, a French Canadian laborer, was admitted into the Montreal General Hospital in November of last year. He gave the following history: In the June previous he felt a severe pain in the second right molar tooth of the upper jaw. A small tumor soon formed round the tooth, which loosened and it fell out. The one next to this soon became affected in the same manner, and shared the same fate. The tumor continued to

grow until it reached its present condition, the growth being accompanied by a good deal of pain. It took two months to reach its present size, and the patient believes it has grown more during the last three months, being troublesome only from a hot tingling sensation.

He is a man of slight frame, is emaciated and cachetic looking; says he has been losing flesh for some months; general functions of body are fairly performed, excepting the secretion of saliva, which has been increased since the onset; cannot use solid food, mastication being so much interfered with.

A firm round movable and painless tumor is seen and felt over the region of the left submaxillary gland. It is now about the size of a small walnut, but has never been painful. A few of the cervical glands on both sides are enlarged slightly. A firm fungoid-looking growth occupies the outer and inner surfaces of the alveolar borders of the supra-maxillary bones, extending from the last molar tooth on the right side to the second molar on the left. It is also attached to the right half of the hard palate as far back as the left molar tooth, the anterior portion of the left half being also involved. There is no attachment to the mucus membrane of the upper lip. The mass is very vascular and bleeds freely at times, the slightest injury giving rise to hæmorrhage.

The removal of the tumor being determined on, the following operation was performed on the 25th November, 1878. The patient was put under the influence of ether and then placed in a semi-recumbent posture. Dr. Ross asssisted. The head being steadied, an incision was made through either cheek, beginning at the angle of the mouth and extending back a distance of two inches, and in a line corresponding to a point midway between the outer canthus and the external auditory meatus. The soft parts were then carefully dissected back as far as the incisions were made, and until the inferior margin of the nasal process of the superior maxillary bone was reached. This flap was held up and a narrow saw was introduced into the nares, and made to cut its way outwards and backwards to the angle of the bone on each side. On removal of this portion of bone thus cut out, formidable hœmorrhage ensued. This

was controlled by the application of ligatures to the vessels in the soft parts, and the actual cautery to those in the bone. All oozing being stopped, the soft parts were brought in situ, and retained by hare-lip needles and cat-gut sutures. At the close of the operation the patient was breathing freely; pulse 88, and regular, but small; was ordered some brandy, and was removed to the ward.

A microscopical examination of the tumor was subsequently made by Dr. Osler, who declared it to be epithelial in its character.

The patient was put upon an exclusively milk diet, with small quantities of stimulants. Four hours after the operation he was very comfortable, with a temperature of ninety-nine degrees, and a full and steady pulse of 72. He was ordered a mouth-wash of chlorate of potash, and the nurse was instructed to paint the glycerine of carbolic acid on the surface exposed by the operation.

From the notes we gather that everything went on most satisfactorily.

On the 11th December the discharge from the mouth is reported healthy, and small in amount; the free surface rapidly healing over. He sleeps well and has an excellent appetite. Altogether his general condition is everything that could be desired. The incisions through the cheeks united well by first intention, so that, excepting a slight falling in of the lip, no disfigurment of any moment, has resulted from the operation.

He returned to his home within one month after the operation, having gained flesh, and entirely lost that cachectic appearance which he presented on admission.

The enlarged sub-maxillary gland referred to in the early part of the report remained *in statu quo* and would have been removed but for the decided stand taken by the patient against any further operative interference. None of the other glands in the neighborhood appeared to be seriously involved up to the time of his discharge.

It is worthy of mention that the thermo-cautere proved itself to be absolutely indispensible as a means of arresting hæmorrhage during the operation.

Case of Compound Fracture of Radius and Ulna, treated antiseptically.—Under the care of Dr. RODDICK.

(Reported by W. H. BURLAND, M.D., Home Surgeon Montreal General Hospital.)

Christina McC., æt. 40, a short, slightly built woman, was admitted to the Montreal General Hospital on the 24th December, 1878, for an injury she had received to her right arm. In going down a flight of steps leading to the yard, she slipped and fell, striking her arm against the edge of a bucket. This occurred about twenty minutes before admission, and was followed by considerable hæmorrhage. Upon examination it was found that there was fracture of both bones of the right forearm, about 1½ inches above the wrist, also a wound through which the upper fragment of the radius could be felt and seen, rendering the fracture compound. There was considerable deformity present which had to be reduced, and as the case seemed a favourable one for antiseptic treatment, it was dressed according to Lister's plan, the wound having first been sryinged out with a solution of carbolic acid, 1-20. The dressings were found to be a sufficient support for the fracture, and no splint was necessary. Considerable hæmorrhage soiled the dressings for the first two days, but no pus formed, and everything remained sweet. The dressings were changed daily for five days, then at longer intervals. The last one removed twenty-one days after the accident, had been on for six days. Very little pus formed at any period in the treatment, and the the wound was always perfectly aseptic in character.

21st Jan.—Wound is quite closed, and good firm union exists between the bones. Can flex and extend her fingers perfectly. No splint, other than the heavy dressing, had been used throughout. Discharged to-day, four weeks after admission.

Reviews and Notices of Books.

A Manual of the Practice of Surgery.—By THOMAS BRYANT, F. R. C. S., Surgeon to and Lecturer on Surgery at Guy's Hospital, &c., with six hundred and seventy-two illustrations. Second American from the third revised and enlarged English edition. Royal, 8vo. pp. xix, 945. Philadelphia: HENRY C. LEA, 1879.

This large volume is a reprint of the English edition (in two volumes) of Mr. Bryant's excellent Manual of Surgery. It is a little over two years since the second London edition of this work issued from the press, and we are called upon to notice this, the third edition, which has in many respects been improved, as extra matter has been added, and the engravings have been increased in number. Mr. Bryant's work is a fair exponent of British surgery, thoroughly practical in its teaching, a favorite text-book with student and practitioner, and one of the best of its kind. No material alteration has been made in the arrangement of the subjects under discussion in this edition, and Mr. Bryant gives the results of his own experience, which has been large, being that of one of the principal Metropolitan Hospitals. But while taking advantage of the experience gained at his own hospital, he does not ignore that of other institutions, and in statistical results he gives the published records of other hospitals both English and Continental. The fact of this manual passing through three editions in so short a time is an evidence of the appreciation of the work, and it is with pleasure we accord to it a full measure of praise. The American publisher has given us a handsome volume, printed on the best of paper with clear and well impressed type, and the engravings are in the best style of art.

The Principles and Practice of Surgery.—By JOHN ASHURST, Jr., M.D., Professor of Clinical Surgery in the University of Pennsylvania, &c., &c. Second edition; enlarged and thoroughly illustrated with five hundred and forty-two illustrations. 8vo., pp. 1040. Philadelphia: HENRY C. LEA, 1878.

This is the second edition of Prof. Ashurst's Manual of the Principles and Practice of Surgery, and the arrangement is the

same as that which he adopted in the first issue of the work. In the preparation of this work, as well as in its revision, the author has availed himself of the teaching of systematic writers on surgical science, and in special departments he has noted the observations of writers of surgical monographs, and in making use of the works of others due credit is given. He has spared no labour in rendering the work a worthy exponent of the subject under consideration. Every article has been carefully revised, and in making changes and alterations which became necessary, he has given much of his own personal observations and experience which he has gained as a clinical teacher and hospital surgeon. New material has been added, but in so doing he has judiciously avoided increasing the bulk of the volume; the number of pages has been but slightly added to. There is a most voluminous index of some sixty pages. This is always to our mind an excellent feature in the preparation of medical or surgical treatises, and is of the greatest advantage more especially in works of reference intended for the use of practitioners. Altogether the work before us will be found a safe guide to the student of surgery, and is also a handy book of reference for the busy surgical practitioner.

General Surgical Pathology and Theraputics in Fifty-one Lectures; a Text Book for Students.—By DR. THEODORE BILLROTH, Professor of Surgery in Vienna. Translated from the 4th German edition and revised from the 8th edition, by CHARLES E. HACKLEY, A.M., M.D., Physician to the New York Hospital, &c. 8vo., pp. xx. 773. New York: D. Appleton & Co., 549 and 551 Broadway.

The work before us is a revised translation of the last edition of Billroth's work on Surgical Pathology. To Dr. Hackley is due the credit of having first given us an English translation of this treatise, which appeared early in 1871. Since then the New Sydenham Society assumed the publication of the work, and now we are in receipt of the very latest, being a revision of the previous translation by Dr. Hackley and corresponding to the eighth German edition.

The work, which gives a general *résumé* of surgical pathology and surgical principles, consists of twenty-one chapters, divided into fifty-one lectures. In the first chapter are considered simple incised wounds of the soft parts, to which is devoted nine lectures. Chapter second consists of a single lecture on some peculiarities of punctured wounds. Contusions of the soft parts without wound are dismissed in the third chapter; after which contused and lacerated wounds of the soft parts are taken up. Simple fractures of bone, open fractures, and suppuration of bone and injuries of the joints form the subjects of chapters five, six and seven, which occupy seven lectures. In chapters eight and nine gun-shot wounds, burns and frost-bites are given. Chapters ten to nineteen, in which will be found twenty-three lectures, are given up to inflammation and its variety of consequences. The subject of tumours is discussed in chapter twenty, divided into seven lectures, and in chapter twenty-one is a lecture on amputations, exarticulations and resections. There is an appendix in which will be found additions from the eighth German edition. These are numbered and are referred to in the text by corresponding numbers. The publishers have done their part well, the type is clear, paper of excellent quality, and the wood-cuts particularly good. In this respect we observe a number of additions which did not appear in the former issue. We commend this work to our readers. It is to be had at Dawson Bros., St. James street.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Intermeningeal spinal Hæmorrhage simulating Strychnine-Poisoning.—E. L. DIXON, M.D., M.R.C.P., (Honorary Medical Officer to the Preston and County of Lancaster Royal Infirmary) says: On the evening of the 12th December, 1876, I was sent for in haste to see a grocer who had been suddenly taken ill. My patient was a tall and very powerful man of forty-nine years of age, who for the previous eight years, during which he had

been under my observation, had enjoyed remarkably good health, having merely suffered from some trifling accidents, and on one occasion from diarrhœa. He had been a farmer up to a year ago, when he had opened a grocer's shop in the town; he was somewhat intemperate, and his accidents had occurred when he was intoxicated; he was of active habits, and was accustomed to lift heavy weights. On this occasion he was taken ill at six in the evening, soon after which I saw him, about half an hour after his "tea." He had been suddenly seized with violent tetanoid convulsions, which continued to recur at short intervals. The body in a paroxysm became completely extended, with the neck, arms, and legs stretched out and stiff for a short time; comperative relaxation then took place, to be followed in two or three minutes by a return of the spasms, during which the patient, who was never unconscious, screamed from the pain which he said he experienced all over the body, but especially in the region of the heart. He asked not to be touched, for movement in any way brought on a return of the paroxysm. When anything was put into his mouth with a spoon, the jaw contracted forcibly upon it, and if swallowing was effected, it was in spasmodic gulps. The pulse, which with difficulty could be made out during a spasm, was in the intervals 74, and of good volume; the pupils during a paroxysm were not insensible, but somewhat sluggish and dilated.

As he was lying upon a stone floor in a back room without any accommodation, during a brief interval from convulsions an attempt was made to remove him to his house. He died, however, before he could be got there. The whole duration of his illness was less than two hours.

As the case presented a very suspicious ressemblance to one of strychnine-poisoning, I declined to give a certificate without a post-mortem examination, although in the most careful investigation I could discover no vestige of any inducement to suicide or murder, nor did it seem possible the poison could have been taken accidentally, for his last meal had been of his customary tea and bread-and-butter; moreover, no vermin or other poison was sold in the shop.

With the assistance of two medical friends I examined the body next day, about eleven hours after death. But neither in the head, chest, nor abdomen could we discover any cause for the sudden death; indeed, all the organs seemed fairly healthy. We, therefore, removed the stomach with its contents tied up, and also portions of the viscera. We then turned the body into the prone position, and carefully opened the spinal canal, when we found the arachnoid cavity filled with black and coagulated blood; there was no opening of aortic aneurism into the canal, and the man had never complained of pain in his back. No attempt was made, on account of the limited time at our disposal to discover the vessel or vessels ruptured. We considered that the extravasation was amply sufficient to account for his symptoms and death, and that it was unnecessary to proceed to the analysis of the contents of the stomach.

There are several points of ressemblance in this case to a case of strychnia-poisoning. 1. The symptoms supervened very suddenly, and within a short time (half an hour) after a meal, in a robust man apparently in perfect health. 2. The convulsions were not attended by loss of consciousness, as in ordinary epilepsy. 3. These convulsions, though certainly clonic, as indeed they are at first after the administration of strychnia, were accompanied with a great amount of rigidity of the limbs, which remained fixedly extended for some time during the height of each paroxysm. 4. There was præcordial or epigastric pain, probably depending upon spasm of the diaphragm, and also spasmodic trismus, which occurs in an early stage of strychnine-poisoning. 5. Though in some cases of strychnine-poisoning the patient asks to be rubbed in order that the cramp be relieved, yet in others the exalted polarity or reflex excitability of the cord manifests itself in the production of the paroxysm by the mere touching of the body, which was a marked feature in this case. 6. The rapidity of death, which occurred within two hours from the beginning of the attack and within two and a half from his last meal. In many cases of poisoning the duration is, however, much less than two hours.

In the various standard treatises on medical jurisprudence I

find no mention of spinal apoplexy or spinal hæmorrhage simulating strychnine-poisoning. Epilepsy, hysteria, myelitis, and cerebro-spinal meningitis are briefly alluded to, but tetanus is considered to be the only disease with which the symptoms produced by strychnine are at all likely to be confounded. Tetanus, however, is comparatively chronic, and may, as a general rule, be easily discriminated from strychnine-poisoning except in cases where the poison has been administered in frequently repeated small doses.

In this case the post-mortem clearly showed the cause of death, but I am by no means convinced that rapidly fatal illness might not occur without such marked appearances, and might closely resemble a case of strychnine-poisoning.—*The Lancet.*

Salicylate of Soda in Rheumatism.—The following are the conclusions by Marrot—*Archives Générales de Médicine*, February—as to the action of Salicylate of Soda in rheumatism :

1. During the course of acute articular rheumatism, there is a notable diminution in the quantity of urine, the proportion of uric acid increasing, and the increase is not explained by the lessened urine,—it is an absolute increase.

2. In cases of acute articular rheumatism left without treatment, the cure is characterized by a notable increase, during some days, of the quantity of urine, and by the return of uric acid and of the urea to the normal proportion.

3. Salicylate of soda given early in acute articular rheumatism, in some way hastens this natural crisis. One or two days after its administration, the urine becomes very abundant, clear and of slight density. There is a relative polyuria ; the quantity of uric acid and of urea is much lessened. It is an interesting fact that these modifications of the urine occur independently of any change in temperature.

4. In the cases of chronic articular rheumatism, the quantity of uric acid and of urea is rather diminished. Here the salicylate of soda has no useful result. If a patient with

chronic rheumatism be subjected to hot baths, the quantity of uric acid contained in the urine is notably increased. Hence, as Professor Lasègue has shown, such baths are exceedingly useful in chronic rheumatism.

5. The salicylate of soda, as well as the hot bath, does not increase the *aglobulie* peculiar to chronic and acute articular rheumatism.

6. During the course of either acute or chronic articular rheumatism, the quantity of phosphoric acid is lessened and so remains whatever treatment may be employed.—*American Practitioner.*

Notes on sewer-gas poisoning—J. BROWN, L.R.C.P. Lond., etc., (Medical Officer of Health to the Bacup Local Board), says: In the Journal for November 16th there was an interesting paper, by Mr. Trend, on sewer-gas poisoning. During the past few months, I have made a number of observations on the same subject, as they confirm his opinion, and also give other effects of sewer-gas poisoning. I have notes of thirteen houses, in which there were grave sanitary defects. In seven houses, the slop-stone pipe was untrapped, and went straight into the drain, and from which there arose bad smells, especially in the hot weather. In the remaining six, there were untrapped and rubble drains, which were close to the door of the house, or passed beneath the floor.

1. *Submaxillary abscess*, and *enlarged cervical glands*, in children aged two and five years respectively. There were untrapped slop-stone, and bad smells from a rubble drain.—2. *Cervical abscess* in a child, aged nine years, probably due to bad smell from defective drain.—3. *Axillary abscess* and "*summer-diarrhœa.*" The child, aged five years, also had other enlarged glands in the axilla and elbow. Diarrhœa occurred in a patient aged six weeks. Another child had recovered from a submaxillary abscess. There were bad smells from untrapped slop-stone and defective drains.—4. *Two cases of inguinal abscess* and *summer-diarrhœa.* One of twins died from exhaustion, due to inguinal abscess, and the other from diarrhœa. The

mother recovered from *inguinal abscess*, the cause being an untrapped slop-stone-pipe.—5. *Facial abscess* in a girl, aged nine years. This was probably due to sewer-gas from an untrapped slop-stone pipe.—6. *Pelvic abscess*, and three cases of "*summer-diarrhœa*." A patient had been confined six weeks. She was very anæmic, and had no appetite. This was due, undoubtedly, to the bad smell in the house. She was taken ill with an abscess in the pelvis. Just at the same time there were three other cases of summer-diarrhœa in the house. The infant died. For the sake of the woman, I recommended that the family should remove at once, which they did, and the patient made a good recovery. The abscess discharged itself *per vaginam*. The cause was a defective privy, from which there was a continual leakage of fæcal matter into the house.—7. *Multiple abscesses*. A baby, aged six months, had twenty abscesses, scattered on its legs, arms, and body. This state was due to bad emanations from a defective privy. The privy was at once altered at my suggestion, and the patient speedily recovered.—8. *Temporal abscess* in a patient aged eleven years. The cause was foul emanation from a defective drain.—9. *Typhoid Fever*. A death from typhoid fever being reported to me, I inspected the house and found that bad smells came from the untrapped slop-stone pipe.—10. *Typhoid Fever*. Another death from typhoid fever was reported. On inspection, I found the slop-stone untrapped, and an untrapped drain close to the door.—11. *Typhoid Fever*. This was a case of typhoid fever in a gentleman living in a new, well-built house. On inspection, I found the drains and slop-stone trapped. The wife, however, complained of bad smells coming from the water-closet, which was on the first floor. The water-supply in the summer being limited, the drain could not be well flushed. The mephitic gases, generated in large quantities in hot weather, would soon saturate the water in the pan of the water-closet, and pass into the house. The drain was long and unventilated; and the sewer-gases, being of lighter specific gravity than the air, would seek an outlet at the highest elevation, which would be the water-closets. The drain has since been ventilated. The patient died.—12. *Diphtheria*, and three

cases of *Sore throat.* A child, aged three years, had diphtheria, and died in three days. In the same house, there were three adults suffering from sore throats, all of whom recovered. I found that there was a bad smell from untrapped slop-stone.—13. *Puerperal Septicæmia.* The third day after confinement, the patient had usual symptoms of septicæmia. She nearly succumbed two or three times. After about five weeks, she had a relapse, which proved fatal. In this case there was a foul smell from an untrapped drain, within a few feet of the door, where the patient was confined.

REMARKS.—It is difficult to state definitely the cause of many diseases. In some of the cases given above, it may be a coincidence, and sewer-gas may not have been the cause. Though I think in most, if not in all, sewer-gas was the chief factor, I would not say positively typhoid fever can be generated *de novo* from sewer-gas; yet my experience goes to prove that much may be said in favour of it.

Summer-diarrhœa, especially in infants and young children, I believe, is often due to sewer-gas. In the summer, decomposition of sewage is very rapid. Infants who are nearly all day indoors in houses in which sewer-gas exists (and there are, unfortunately, a large number among the poor) soon get diarrhœa. Of course, there are other things to produce it.

Diphtheria and sore throats are often due to sewer-gas. House No. 12 seems to prove that the poison which generated diphtheria in the child, in the three adults caused bad sore throats. Several cases of death from puerperal fever have occurred, generally in houses which are subject to bad sanitary arrangements, especially as regards drainage and ventilation. I have had a large number of abscesses in children during the past summer. In nearly every instance there were strong reasons to believe it to be due to sewer-gas. As a rule, if two or more persons in a house are suffering from summer diarrhœa, or abscesses, we may suspect sewer-gas. Sewer-gas is especially dangerous to children. Older persons may resist its influence; but in them it will probably be the cause of anæmia, nausea, and headache. In the winter, when the decomposition of sewage

matter is far less active than in the summer, I have found that infantile diarrhœa and abscesses are very few when compared with the number of cases occurring in the summer months.—*British Medical Journal.*

On the Treatment of Diseases of the Colon.—Dr. Dubois enumerates the diseases of the colon in which the injection of large or small quantities of water is indicated. He then adds some practical hints on the different ways of administering the fluid. There are two different kinds of enemata employed. First, the simple enemata, which are used in cases of constipation, when it is found necessary to remove fæcal masses from the sigmoid flexure, the cæcum, or the rectum, in cases where the mucous membrane of the rectum is diseased, and it is indicated to bring it into contact with water or medicine; secondly, very large enemata, which will be found efficient in cases where the water ought to be injected high up into the large intestines, whenever there exists a catarrhal affection of these portions of the intestines. Some patients can bear, without incurring pain or danger, enemata of 1,000 to 1,500 cubic centimetres of water, but in others such a large volume of fluid would either prove very dangerous to the intestines, or could not be injected on account of the great irritation of the intestinal muscles. In such cases, where it is of obvious necessity to inject a large bulk of liquid, the author advises the following method. Tepid water is injected till the patient feels a violent strain. The syringe is then removed, and the patient slowly changes under the bed-clothes from his right or left side to crouching on his knees and elbows. After one or two minutes the former position is again assumed for a short time, and then the patient lies down upon his back. The same operation and changes of posture are then repeated, and defæcation generally ensues in about ten minutes or half an hour after the injection has been given. This method is indicated: *a*, in cases of constipation where purgatives and the usual enemata can either not be given or have proved powerless; *b*, in cases of coprostasis where fæcal tumors, varying in size, can be felt in the

cæcum or other parts of the large intestine, and have sometimes been mistaken for ovarian cysts. Here purgatives given by the mouth are either vomited or have no effect; *c*, it is well known that inflammations of the vermiform process are mostly caused in healthy individuals by accumulation of fæces. Whenever, therefere, a slight tenderness and increased resistance are felt in the iliac region, especially in persons who have suffered from typhlitis before, a bulky injection will be found very useful in preventing the inflammation and removing the fæces. Narcotics should also be used in these cases; *d*, in cases of general or local peritonitis, when constipation and accumulation of gases in the abdomen have been produced by paralysis of the intestinal muscles; *e*, in cases of diarrhœa caused by constipation or accumulation of fæces; *f*, in abscesses of the intestines, dysentery, etc. (*Schweitzer Correspondenzblatt Memorabilien*, 1878, ix. Heft.)—*The Practitioner.*

The pathology of rodent ulcer.—An interesting discussion on the nature of rodent ulcer took place recently in the London Pathological Society. The discussion was raised by the Drs. Fox, who presented microscopical specimens to the meeting and stated that their investigations had led them to take different views concerning rodent ulcer from those advocated by other observers. Thiersch distinguished two kinds of epithelial cancer, the ordinary penetrating epithelial cancer, and the flat epithelial cancer; the latter being identical with the rodent ulcer of English writers. He was the first to insist on the epithelial nature of this affection. He bases his opinion that there are two kinds of epithelial cancer of the skin mainly, if not entirely, on the histological evidence, and considers it probable that the cell-masses in rodent ulcer take their origin in the sebaceous glands, because the general shape of the masses ressembles that of the glands, and because they are often found near a hair. He does not, however, find any direct evidence of the origin of the cell-masses from the glands. On the other hand, Verneuil published in 1848 a case in which ulceration of the face was produced by a cell growth, which he

believed to have begun in altered sweat-glands. Thiersch and Thierfelder have also both described undoubted fatal cases of adenoma of the sweat-glands. It can hardly therefore be doubted that adenoma of of the sweat-glands constitutes a variety of cancerous disease. In four cases of rodent ulcer, Dr. Thin was not able to trace the disease directly to any of the epithelial structures of the skin, but in two of his cases he found the sweat coil the seat of a new growth. From this, and from the resemblance of his cases to Verneuil's case, he was led to infer that it is highly probable that the cell-masses of rodent ulcer originally begin in the sweat-glands. He points out that the cells in rodent ulcer differ from those of epithelial cancer, strictly so called, never taking on the characteristic changes of the latter. His view, that in rodent ulcer we have a true adenoma to deal with, he believes to be strengthened by the fact that he has demonstrated a membrana propria between the cell-masses and the connective issue.

The Drs. Fox, on the other hand, say that rodent ulcer is an epithelial growth which takes its origin from the external root-sheaths of the hairs, that is to say, from a purely epidermic structure. In the discussion on their paper, Dr. Thin declared that the specimens presented were specimens not of one disease, as the Drs. Fox believed, but of two distinct diseases, some of them being preparations of ordinary epithelial cancer, and others of rodent ulcer. This wide discrepancy in the interpretation of the appearances naturally rendered the discussion unprofitable, except in so far as it has aroused attention to the questions whether there are two distinct kinds of epithelial growth producing cancer of the skin, and whether it is possible to distinguish them microscopically. We may expect before long to have this question definitely settled.—*The British Med. Journal. Medical Record, N. Y.*

The treatment of Acute Obstruction of the Bowels.—Writing on obstruction of the bowels, Dr. T. C. Allbutt says, in the *British Medical Journal.*—Let us dispose hastily of all cases of essentially chronic obstruction. They rarely need heroic action or great presence of mind either

in physician or surgeon. We thus clear our way to the essentially acute cases; and we have found that in these inflammation always counts for something, generally for a good deal. Now, whether we know exactly how to deal with the main cause or not, we always know how to deal with the inflammation; and except in the extremest urgency, our first duty is to simplify our case by lessening this. Unfortunately, means are often used which tend rather to aggravate the enteritis, and of all these, injections into the bowel are the most mischievous. Even in the case of fecal accumulation, it is not the fecal mass, but the inflammation set up by it, to which the explosion is due, so that even in these cases it is wild practice to pump into the inflamed bowel and to drag the patient hither and thither in bed. Even for diagnostic purposes, enemata are rated far too highly, and are rarely of much service. Clearly, it is our duty to reduce our case by complete rest, opiates, formentations, and a leech or two to the abdomen, or anus until the enteritis subsides, and then we can deal as we see fit with its cause. But if enamata are abused in fecal accumulation, wherein they are chiefly valuable, what are we to say of the fashion of forcing their employment in cases of internal strangulation? It is certainly conceivable that an intussusception may be unfolded by a forcible and ample injection, or by the insufflation of air, but to force air or water against a knotted or snared loop of intestine is surely outrageous meddling. And yet I have never been called into a case of such obstruction without finding that such a measure has been assiduously employed, to the harassing of the patient, to the aggravation of the symptoms, and to the increase of inflammation around the stomach. I believe no formula can be drawn from our experience of more value than this, namely, that if rest in every way be sedulously enforced, and the inflammation which palsies the bowel be carefully combated by the use of sedatives, such as opium and belladonna, and other means, cases of obstruction of the bowels tend to recovery.

Medical and Surgical Reporter.

Jaborandi in the Albuminuria of Pregnancy.—Dr. Langlet, of Rheims, publishes an elaborate account in the *Union Medicale de Nord-Est* of a case of albuminuria during pregnancy which he treated successfully by the administration of jaborandi. The patient, three months advanced in pregnancy, showed the ordinary symptoms of albuminuria. The action of the jaborandi on the salivary glands became apparent on the day of administration. The patient took the drug continuously for a period of sixteen days, during which time the œdema disappeared, and the general symptoms were improved. The albumen was likewise lessened to such an extent that not the slightest trace could finally be detected, and the lying-in occurred under the most favorable circumstances.

Dr. Langlet has noticed that the administration of jaborandi caused an increase in the urinary secretion, and this coincides with a somewhat similar observation of Mr. Render, who found that in a case of acute nephritis the drug caused polyuria. On the fifteenth day of the administration of the drug hæmaturia occurred, so as to give the urine a disagreeable odor and bright color. This accident, which did not retard the recovery, is to be attributed to the excessive work imposed upon the kidneys by the increased secretion, leading to congestion, and the congestion to actual hemorrhage.—*Edinburgh Medical Journal.*

Pruritus Vulvæ.—Dr. Mendenhall recommends (*Obstetric Gazette, Dec.*, 1878) :

℞. Sodæ biborat . . . . . ʒ i
Plumbi acetat. . . . . ʒ ss.
Tr. opii. . . . . f ʒ j.
Aquæ destil. . . . . f ℥ viij.

M. Sig.—Soak clothes in the solution and lay them upon the external parts affected, between the labia, etc. Keep the clothes freely wetted. Inject one ounce of the solution into the vagina several times a day. When the pruritus has been subdued, apply a solution of carbolic acid in glycerine (gtt. xx. to f ℥ i.) once or twice daily.

Chrysophanic Acid.—A writer in the *Chemist and Druggist* says: Chrysophanic acid ointment has been much vaunted as a remedy for psoriasis, but it is so very irritating that it requires great caution in its use. The first case in which we saw its effects was in hospital practice. A woman with psoriasis about the arm and shoulder was told to apply the ointment, but returned much disgusted, in a day or two, to say that her linen was spoiled, and it was found stained of a deep, dark purple color, and, in addition, there was severe erythema extending from the seat of disease up the arm. The ointment was discontinued, and the irritation soon subsided. In another case the ointment was applied to a patch over the knee; it caused erythema all around the part affected, and gave rise to conjunctivitis, which lasted two or three days, but in each case the local disease was removed. It is also said to turn the hair a peculiar purplish-brown tint and to stain the skin, but Dr. Balmanno Squire states that this may be removed by benzol.—*Medical and Surgical Reporter.*

Abnormal Lowness of Temperature and its Dangers.—Whilst increase of temperature occuring in various morbid conditions is always carefully noted, deviations in the opposite direction are seldom alluded to. In an inaugural dissertation published at Berne, Dr. Glaser points out that instances of this latter phenomenon are more common than is usually supposed, that a temperature between 34° and 35° C. may be frequently met with, and that a fall below 30° C. is not very rare. Low temperatures are not indicative of danger, to the extent commonly supposed; recovery has been known to take place after temperature of 24° to 26° C. The danger in any given case is to be estimated not only in the fall in temperature, but mainly by a reference to the causes to which it is due; and the variations in temperature, often great and occurring under normal conditions, must be taken into account. Dr. Glaser also points out that subnormal temperatures do not always accompany relapse, but that the two conditions may occur quite independently of each other—(*Med. Examiner*, Aug. 8. 1878.)—*The Practitioner.*

Causation of Septicæmia.—M. Colin, of Paris, read before the Academy of Medicine in that city a paper on the above subject, of which the following is a résumé (given by the London *Medical Record*): "Putrid material, according to its quantity and degree of alteration, exerts a variable action on the animal organism. In a large dose it determines a rapid and invariably fatal poisoning, which causes no marked alteration in the blood beyond a tendency to incoagulability, and is not associated with the reproduction of proto-organisms. In cases of this kind the injected fluid fails to communicate any kind of virulent property either to the blood or to any other juice of the economy. In reduced quantity the animal fluid gives rise to an adynamic febrile condition, which varies in intensity according to the nature of the animal. If this condition proves fatal, it is so through the production of visceral lesions, and through changes in the blood. Reproduction of proto-organisms takes place, at least in those parts where the putrid agent has been deposited, and frequently throughout the whole mass of the blood. Certain putrid fluids that have not undergone much alteration, such as blood mixed with products of intestinal transudation, decomposing blood of an animal affected with carbon, peritoneal serosity removed some time after death, may alone, when injected in extremely minute quantities, determine septicæmia transmissible by inoculation, after the manner of the majority of virulent affections. Here there is always virulence of the fluid and reproduction of the proto-organisms introduced from without."—*Med. and Surg. Reporter.*

Tape-Worm in Cucumbers.—At a late meeting of the Academy of Sciences of Philadelphia, Prof. Dr. Leidy exhibited a specimen of tape-worm found within a large cucumber. This specimen was a true tape-worm, but of an unknown species, the ovaries being confined to the anterior extremities. —*Medical Record. N.Y*

CANADA

Medical and Surgical Journal.

MONTREAL, MARCH, 1879.

THE REGISTRATION OF BRITISH QUALIFICATIONS

The Medical Council of the Province of Ontario has been compelled to recognize a diploma submitted from the University of Edinburgh, and to register the applicant, Dr. Baldwin of Toronto, on the payment of the registration fee, without examination. This is quite in accord with an opinion expressed in this journal years ago, when first this unholy Act was hatched. That it was an outrage to the Profession as a whole and unconstitutional, was an opinion expressed at the time by high judicial authority in Ontario itself, and we doubt much if the act would be effective in excluding from registration any graduate holding a diploma from a recognised University possessing a Royal charter. We have all along been under the impression that our Colonial Universities could claim registration for their Graduates, such institutions at least that hold Imperial charters, and we cannot conceive why it should be otherwise. We have always opposed the degradation of our own universities. If the examiners in those institutions are untrustworthy, or inclined to do their work in a slovenly manner, then should they be deprived of their function and replaced by better men. We hold that it is this very system of belittleing our own institutions which has deprived us of that recognition in Great Britain which is desirable. It is not to be expected that the Medical Council of Great Britain will recognize a Colonial Diploma that is not recognized in its own country. The entire system appears to us to be faulty, and we must cast about for some other method

if we would obtain from other countries an acknowledgment of our professional status.

With regard to the proposal on the part of the members of the Executive Committee of the Medical Council of Ontario, and their request, to be granted the privilege of exacting a very high fee to check-mate this action of the Universities, it is so very peculiar that we have not been able to digest it sufficiently to make any remarks thereon. Its modesty is very refreshing. We have no doubt that in course of time their request will be granted, and that the profession of Ontario itself, with all its liberality, will ultimately be brought to believe that their best interests lie in littleness, exclusiveness and puffed up self-importance.

ACCIDENT TO DR. HENRY HOWARD.

We are sorry to learn that our old and respected friend Dr. Henry Howard met with a serious accident by which his left arm was broken near the shoulder-joint. In proceeding to the Longue Pointe asylum, of which institution the Doctor has professional charge, his sleigh was upset, and he fell heavily on his left side and sustained a fracture of the humerus at the surgical neck; an accident of this nature occurring in a man of Dr. Howard's age, was regarded with anxiety by his friends; we are happy to announce, however, that the Doctor is fast recovering, and that with his accustomed zeal and energy he will soon be at his work again. The following resolution was passed at a late meeting of the Medico-Chirurgical Society, over which Dr. Howard presides:

Moved by Dr. KENNEDY, seconded by Dr. RODDICK, and carried unanimously:

"That this Society has learned with great regret of the serious accident which has happened to their respected President, Dr. HENRY HOWARD; That the Secretary be instructed to convey to Dr. HOWARD the sincere sympathy of the Society, and the gratification it will give to see him once more in his accustomed place. That this Society has learned with pleasure of the action of the Local Government authorities in at once appointing an assistant to relieve Dr. Howard from the anxiety of his charge."

AMERICAN HEALTH PRIMERS.

The well known publishing house of Lindsay & Blakiston, Philadelphia, have undertaken the publication of a series of works written in a popular style, for the purpose of diffusing a knowledge of sanitary science. The subjects discussed in each volume are of the very highest practical importance to communities, as well as to individuals, and we have no doubt that this worthy attempt will meet with very general approval. As a rule in this country, the subject of sanitation is not as fully recognized as its importance demands. Public health associations are doing good work, and the results are beginning to tell in a marked improvement in the comforts of life and the lessening of disease. Sanitary legislation is as yet unknown in this Dominion, nor has it attained that prominence amongst our neighbors which it deserves. In the announcement of these volumes, by the publishers, the hope is expressed that "the American Health Primers may assist in developing a public sentiment favorable to proper sanitary laws, especially in our large cities." This sentiment we fully endorse; but in our own country we trust that if any sanitary laws are introduced their application will be general and not restricted to our large cities. We regard all sanitary matters to belong to the central government of any country, constituted as is our Dominion. Local enactments and provincial regulations are all well enough in their way, when they affect alone the comfort of local communities; but matters which affect the sanitary condition of an entire nation should be alone dealt with by the parent government.

The Canadian statesmen who in the future will introduce and carry through the House of Commons at Ottawa a comprehensive Public Health Act will be a great benefactor to the community at large. It is true that several Acts are on our statute books bearing on sanitary science, so that we are gradually getting in the thin edge of the wedge, and probably before the termination of another century, when we may have men at the

helm of state, independent as to means, and above party srtife; men of pure and unsullied honour, not party or purity men, alive to every chance of turning a penny, be it honestly come by or otherwise, then may we hope for some devotion to the subject of sanitary-science, and some legislative enactments which will reduce very considerably our present heavy mortality rates. It is for the very purpose of educating the masses to the importance of these subjects that the publishers have undertaken the issue of these volumes. We give below the scheme proposed:

"Dr. W. W. Keen has undertaken the supervision of the series as editor, but it will be understood that he is not responsible for the statements or opinions of the individual authors.

The following volumes are in press and will be issued about once a month:

I. HEARING, AND HOW TO KEEP IT. By Charles H. Burnett, M.D., of Philadelphia, Surgeon in charge of the Philadelphia Dispensary for Diseases of the Ear, Aurist to the Presbyterian Hospital, etc.

II. LONG LIFE, AND HOW TO REACH IT. By J. G. Richardson, M.D., of Philadelphia, Professor of Hygiene in the University of Pennsylvania, etc.

III. SEA AIR AND SEA BATHING. By William S. Forbes, M.D., of Philadelphia, Surgeon to the Episcopal Hospital, etc.

IV. THE SUMMER AND ITS DISEASES. By James C. Wilson, M.D., of Philadelphia, Lecturer on Physical Diagnosis in Jefferson Medical College, etc.

V. EYESIGHT, AND HOW TO CARE FOR IT. By George C. Harlan, M.D., of Philadelphia, Surgeon to the Wills (Eye) Hospital.

VI. THE THROAT AND THE VOICE. By J. Solis Cohen, M.D., of Philadelphia, Lecturer on Diseases of the Throat in Jefferson Medical College.

VII. THE WINTER AND ITS DANGERS. By Hamilton Osgood, M.D., of Boston, Assistant Editor Boston *Medical and Surgical Journal*.

VIII. THE MOUTH AND THE TEETH. By J. W. White, M.D., D.D.S., of Philadelphia, Editor of the *Dental Cosmos*.

IX. OUR HOMES. By Henry Harthshorne, M.D., of Philadelphia, Formerly Professor of Hygiene in the University of Pennsylvania.

X. THE SKIN IN HEALTH AND DISEASE. By L. D. Buckley, M.D., of New York, Physician to the Skin Department of the Demilt Dispensary and of the New York Hospital.

XI. BRAIN WORK AND OVERWORK. By H. C. Wood, Jr., M.D., of Philadelphia, Clinical Professor of Nervous Diseases, University of Penn., etc.

Other volumes are in preparation, including the following subjects:—"Preventable Diseases," "Accidents and Emergencies," "Towns we Live In," "Diet in Health and Disease," "The Art of Nursing," "School and Industrial Hygiene," "Mental Hygiene," etc., etc. They will be 16mo in size, neatly printed on tinted paper, and boend in paper covers. Price 30 cents; flexible cloth, 50 cents.

Medical Items

It is with pleasure we give space to the following letter received from Dr. Roddick, to whom, at least, is due the credit of having first introduced the antiseptic method of Lister into this city.

Montreal, March 9th, 1879.

DEAR MR. EDITOR.

In a paper on "Listerism," which I read at the last meeting of the Canadian Medical Association, and which was published in part in the February number of your Journal, I make the statement, open to correction however, that the practice of Lister was first introduced into Canada through the Surgeons of the Montreal General Hospital. Immediately after the publication of the paper, I received the following letter from my esteemed friend Dr. Mack, of St. Catherines, which, in justice to him, I beg you will have the kindness to publish :—

GENERAL AND MARINE HOSPITAL,
St. Catherines, Ont., March 5th, 1879.

MY DEAR DOCTOR.

The antiseptic treatment was first established in this hospital immediately after the details of the process had been promulgated by Dr. Lister, and fully one year before it was tried in Montreal. I can furnish you any evidence you may demand of the fact.

As to the results, they have been very satisfactory.

Yours faithfully,

THOS. MACK.

I can only say I am delighted the "System" has found such an able advocate, and I trust the day is not far distant when the profession will be favoured with the results of Dr. Mack's experience.

Yours truly,

T. G. RODDICK.