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Original Communications.

Rheumatism being an inaugural dissertation presented to the Medical Faculty of the University of Bishop's College.—By JOHN T. DAVIS, of Barbadoes, West Indies.

It is not my intention to enter into a methodical disquisition of this subject; not because I do not appreciate *method* in writing on a medical subject,—quite the contrary. But I presume it will be generally admitted that in no branch of Science is the cry for “more light” more earnestly vociferated as in the Science of Medicine. But let me hasten to remark, that whilst what I may have to say on this subject will be very far from adding “anything new,” yet the line of thought I propose to follow will admit of a few statements peculiarly my own, as results of observation and reflection; and this too will prevent me from treating the subject in the usual manner, and with wonted detail.

What is *Rheumatism*? One author says it is an affection which “arises from some unknown abnormal condition of the blood.” The etymology of the word reminds us of the “humoral pathology”—being derived from a Greek word signifying “a humour floating in the body causing disease.” Another author says: “Under the term *rheumatism* are included several diseases which vary in every respect except one, which is their being always painful. The action of the poison is not limited to any texture or organ; although it particularly affects the *white fibrous tissue* which enters into the formation of the aponeurotic sheaths and fasciæ, ligaments and tendons as well as the fibro-serous membranes. Consequently the parts most frequently involved are the joints and surrounding structures with the pericardium and endocardium.” From these statements it will be seen that the condition expressed by the term “rheumatism” is not yet well understood; and most authors, so far as I have seen, substantially agree in the above descriptions.

All agree further in regarding it as a constitutional disease; but as to what is the prime cause of the disease we are yet to learn. Acute rheumatism is better described: “It is a disease characterized by fever, profuse acid sweats, and inflammation of the fibrous tissues surrounding one or several of the large joints. It is especially formidable from the suffering it causes, from the intensity of the fever and from the damage which is so frequently produced by it to the heart.” But still it will be observed we

are yet to learn what the essence of the disease is. Whilst I do not attach overmuch importance to names of diseases, and hence very little to the term “rheumatism,” yet it does seem to me a matter of some moment to be acquainted if possible with the rationale of those conditions of the system which as a common occurrence often lead to inflammation of such important structures as the membranes of the heart, and not unfrequently of the heart-substance itself. But it might be asked: *qui bono*? What is the practical benefit to be derived from such knowledge? I hope to shew ere I close that upon it will depend a proper estimate of the treatment which generally obtains notoriety as being about the most rational mode of practice in this affection. Now I question very much the correctness of a part of the description above given of rheumatism, viz. that it is an affection which “arises from some abnormal condition of the blood”—this is doubtless true when looked at *in result*, and as being the immediate pathological cause of rheumatic fever, for instance. But the question arises: What is the nature of that abnormal condition? The answer is, no doubt: it consists in “the presence in the blood of a poisonous material,” or “in the presence of a superabundance of lactic acid.”

Now another question: Whence the origin of this poisonous material? I believe we shall find the ultimate cause of rheumatism (using this term as comprising the acute and subacute varieties of the disease) to consist in a disturbance of the *nutritive and eliminatory* processes.

Let us now observe the following cases:—

“The patient, John Kennedy, age 14, was a plasterer's boy, in which situation he was much exposed to cold damp atmospheres, and also to standing and kneeling in moist places. His parents are both alive and well; his mother has had rheumatism. He was quite well up to a fortnight ago (excepting an illness that resulted from a blow on forehead 3 years ago.) On the 9th June he had pain in all his joints, which so increased as to interfere with his getting about. He had to leave work and go to bed. The parts were very red. He perspired very much, was very feverish and had many rigors. He kept his bed until his admission to the hospital. He is a patient in good condition, sanguineous.”

Another case:—Alfred Trew, age 19, was a waiter at an hotel and had much to do with alternations of heat and cold; now perspiring in the kitchen and then in the parlor in a draught. He is of sober habits, and has not been exposing himself to night

air. About eight weeks ago he had a few rheumatic pains in his shoulder. He had previously good health. On the 14th his legs were very painful and the joints tender. He was very feverish and had slight headache.

These are parts of histories of two cases which are here inserted as being illustrative of the general run of cases that occur in this affection. The majority of patients enjoy previous good health; but on a sudden exposure to cold and wet, sitting in a draught when heated or perspiring, or neglecting to change wet clothes, &c., a *sudden chill* is produced.

There are many other exciting causes no doubt—errors in diet, and scarlatina occasionally. The predisposing causes are still more numerous, *e. g.*, previous attacks increase the predisposition; individuals (males especially) from 15 to 36, especially from 16 to 20 years of age. Climate and season—the disease occurring especially in temperate climates, but these having moist air, and experiencing sudden changes in temperature. To these may be added a state of ill-health and mental depression and anxiety, which are all examples of predisposing causes of this affection.

And let it be noted that the disease frequently occurs in the apparently strong and healthy; in fact it would seem that the greater the strength the greater is the tendency for this exposure to lead to rheumatic fever, instead of pneumonia or pleurisy for instance,—these occurring usually if there have been any predisposition to them.

Now it would seem that this exposure to the action of cold whilst perspiring is in direct relation with the function of elimination and the *calorific* process.

How is the heat of the body generated and maintained? Most physiologists, not quite so radical as Dr. Draper, who maintained substantially (so far as I can recollect) that the process of heating the body is precisely analogous to the heating of our rooms on a cold winter's day—by putting coals into the grate and allowing free access of the oxygen of the air for the purpose of combustion. I say most physiologists agree that the process, whilst it is eminently chemical in its nature and behaviour, is pre-eminently a vital one. And this must needs be so, since, for the purposes of health, all other processes which take place in the human economy, physical, chemical, &c., must be subordinated to the dominance of the vital processes—dependent on the vital energy.

Let this vital energy or nervous force be below par, and we may have a stoppage or reversal of the

current of many of the most important transformations that are incessantly taking place in the system.

It is a physiological fact that the starchy element of our food supply the calorific materials of the body. Converted into dextrine, then into glucose, it may be chemically found in the blood as the latter after the injection of starchy substances, &c.

The glucose is the *wood* which forms the coal—lactic acid—which is to be burnt (oxidised) in the furnace. This furnace is not the lungs, or the *general* circulation, or the systemic *capillary* circulation when taken singly; but it comprises all three, particularly the last. Let it be understood then that this lactic acid is but a *factor* in the whole calorific process. As to where it is first formed, it is not my purpose or duty here to stop to inquire. Suffice it to say it is itself the result of oxidation, and therefore glucose may be said to start the process of oxidation. Lactic acid then appears in the blood, normally, as lactate of soda, having chemically combined with that free alkaline base. It now becomes a neutral vegetable salt. The process of oxidation continuing from the lungs through the general circulation—but particularly in the systemic capillary circulation—this fuel of the system is converted into a carbonate, and water; the carbonic acid being afterwards freed from the base to be excreted via the lungs for the most part—a portion being excreted by the skin. The comparatively small excess of lactic acid that might normally be formed, is excreted through the cutaneous transpirations and urine—having been taken up by the absorbents.

I have said “comparatively small excess,” for it should be considered what a large quantity of this acid must be expended in twenty-four hours, in the process of calorification, especially in those whose occupations call for bodily activity. That lactic acid is an ingredient in the sweat of the body may be considered as certain, it having been first discovered there in the year 1807, by the celebrated Berzelius, and subsequently confirmed by other chemists. It must be recollected here, also, that in cases where starchy food is withheld, and saccharine matters taken in small quantities, lactic acid is formed from animal food, glucose being manufactured out of albumen by the agency of the liver.

This oxidation under control of the vital energy necessarily results in a supply of heat to the body. Now this is what I believe to be one of those vital processes which are incessantly taking place in the animal economy. It is essential, of course, for its perfect performance that no *break* should occur in the concatenation of events which make up the entire

process. Now it will be admitted that, according to the view above taken as to the nature of the calorific process, the profuse acid sweats and extremely acid urine which are among the prominent phenomena of rheumatic fever are but a certain index of a *break* in this vitally chemical process—other attending phenomena of course telling the same tale. And in no individual is the break so likely to occur as in that young man who exposes himself whilst in a state of perspiration, and with an active circulation, to such a potential agency as a *colli* wind for instance which thus results in a sudden chill. I do not mean to say that this latter is anything more than the exciting cause; of course there must be likewise the predisposing cause, which I hold to be prominently partial failure, or deficiency in that part of the vital energy which presides over the process of calorification. This latter circumstance by a coincidence of events,—the exposure, the driving back of the perspiration which, as we said, contains lactic acid, the vital action of the cold on the capillary zone,—eventuates in throwing on the system as a bye product, what formed an important factor in such an important process as the production of animal heat. I need not say that this deviation may be the work of a very few minutes, or in bad cases, may extend over a much greater period of time. This circumstance will thus, in a great measure, determine the degree of severity of a case of rheumatism.

It matters not how long this deviation lasts,—the result is the same pathologically: a certain amount of *foreign matter* (for so it is after severance of this vitally chemical connection) is thrown upon the system and thereby into the circulation, for decomposition or elimination, or both. This foreign matter produces a specific inflammation in the tissues—especially the *fibro-serous* variety. But now an important question might be asked: Why are the fibrous structures of joints and serous membranes so prone to be affected by the rheumatic virus?

To this I cannot give a perfectly satisfactory reply, as I can get no light from the authors I have perused on this subject. It seems quite possible, and perhaps probable, that the following explanation is the *true* one:—Kolliker states that “serous membranes possess *no glands*, and upon the whole but few vessels and nerves.” This being so, it seems quite possible that these membranes are especially amenable to the action of the poison which, being poured into structures possessing but few absorbents, remains in a great measure as a specific irritant, causing inflammation with its attendant results—chief of which is the *pain*.

It must be remembered that in very severe cases other structures than the fibro-serous are painful. I have seen many patients in the hospital suffering from this disease evince the greatest anxiety the moment the bed was approached. And if perchance a student should unintentionally let the weight of his hand rest on the leg, or even the bedclothes, he would soon be admonished that he was an unwelcome visitor, by the cries, &c., of the unfortunate, and this is especially so where there is little or no diaphoresis. But the profuse acid sweats which are a very usual attendant on this form of inflammation soon tell the tale, that the aid of the general lymphatic absorbents has been called into requisition and are acting their part well. In severe cases, however, where the deviation, or rather *arrest*, is long continued, I need not say the whole system is taxed with the burden of ridding itself of this now foreign associate, the circulation becomes overloaded with it, and is now rather the instrument of irritation than of nutrition. Hence are manifested the following symptoms:—High fever, the temperature ranging from 100 to 104; in bad cases the temperature has been known to be as high as 110 or even higher, and in some cases, as in cholera, to rise after death; restlessness and uneasiness, but inability to move on account of the pain; copious perspirations, the patient being bathed in sweat which has a characteristic *sour* or acrid smell, like sour bread, and usually of a very acid reaction. Sudamina now appear and may be abundant, coming out in crops. The pulse is full and strong: the tongue thickly coated, with much thirst, anorexia and constipation. The urine is remarkably febrile, deposits urates abundantly, and sometimes contains a little albumen.

Generally there is sleeplessness as a result of the pain, but immunity from head symptoms *as a rule* is rather to be remarked in cases of rheumatic fever. Occasionally, however, slight delirium exists. As I said before, *pain* is generally complained of; to this must be added stiffness. But the joints are especially the affected structures. Sometimes these pains may begin like cramps, say in the right hand extending *gradually* to the shoulder. Next may follow the right knee, becoming painful, tender and swollen. The medium-sized joints are the ones usually affected—elbows, knees, wrists and ankles; but pressure on one trochanter might possibly reveal that the hip-joint is not exempt.

The pains may be erratic in character—flying from one joint to another, or may involve several joints together. From these symptoms and many more that might be mentioned, it is clear what severe con-

stitutional disturbances are wrought by this "break" referred to. But worst of all are the heart complications which every physician looks for, as a rule, in these affections. What I have stated with regard to the possible etiology of the inflammation of joint-structures applies equally to the membranes of the heart. I do not deem it compatible with the plan of this effort to enter into the subject of *complications*, other than merely to mention the fact that pericarditis, endocarditis with consequent valvular disease, myocarditis and the formation of fibrinous deposits in the cavities of the heart, pleurisy, pneumonia, or bronchitis, are all liable to occur as complications of this disease. To these may be added peritonitis, which is rare; rarer still are cerebral and spinal meningitis. I may mention here before I forget, that the fact that lactic acid has been injected into the peritoneum and other serous cavities, producing the genuine rheumatic symptoms and pathological sequelae, only corroborates, as it seems to me, the view taken as to the ultimate pathological cause of rheumatic fever. In this case the lactic acid having been introduced stealthily, so to speak, and not in the natural way, it never has been, nor, as I believe, can it ever be a factor in this vitally chemical process of calorification, and hence is an intruder which must be got rid of. Hence too, (I shall have to speak more at length on this score when I come to treatment,) the injustice done to the venerable "vis medicatrix naturee" to assert that the alkaline treatment is what must be looked to in most cases to effect a cure. That it has its place, and deservedly so, I deny not. But it is only a *chemical* remedy as it regards the specific poison in this affection. But more of this presently. As to the hyperinotic state of the blood in rheumatic fever, it should be noted this does not necessarily mean a superabundance of fibrin in the system. If it were so, an occasional sequela of rheumatic fever, and one which came under my notice at the Montreal General Hospital, would not be likely to occur—I speak of *purpuric extravasation*.

In illustration, the following case might be related: A young man, about 22 years of age, well nourished, &c., was admitted into the hospital in January, 1874, and was found to be suffering from acute rheumatism. Many of the symptoms above mentioned were well-marked in his case. Besides, there was developed about the third day after admission a distinct systolic endocardial murmur, which was soon determined to be *mitral regurgitant* (which persisted for some time after he left the hospital, as I had the opportunity of ascertaining for myself). One morning

during his convalescence, he happened to stand for a few minutes beside his bed. In a short time after, the lower part of his left leg presented a well-marked *purpuric extravasation*. The attending physician told us it was the result of his weakened condition. No doubt it was; but that young man, even after he got strong, continued to manifest the *hemorrhagic* tendency—bleeding at his gums was a common occurrence, as he assured me more than once. It is beyond my province here to enter into an investigation of the etiology of purpura. But I may state that his blood was evidently *aplastic*, and hence, although there might have been an hyperinotic condition of his blood, the supposition that this was due to its not being deposited in the tissues on account of the systemic derangement is alike possible. But the more probable view as to it, is this:—From the deranged calorific process as above described taking place, animal heat must be supplied from some source, and hence the proteinaceous compounds, the fibrin-forming elements, are called into requisition to supply it. I think there can be little doubt that the formative process at this time is much diminished if not almost checked; hence the materials that are normally used in this process are by a retrograde metamorphosis called into requisition to supply heat. And the oxidation of these tissues always result in abnormal increased temperature (*fever*). And hence, perhaps, the hyperpyrexia so common in this disease. It may be noted too, here, that the purpura hemorrhagica, which is sometimes seen during convalescence, &c., is probably due to a weakened state of the capillaries as a result of this interference in the *formative process*, their minute vessels rupturing on the patient's getting into the erect posture for instance, and causing the sub-cutaneous extravasation. The diminution in the number of the red blood corpuscles has also been observed, which may be due to this formative interference. In fact it is in this disease that is to be particularly observed—a process of "back-working"—the reversal of the engines in a measure. The subacute variety of this affection now demands a little consideration.

This is often a very troublesome complaint. There is very little pyrexia; but in some instances the acid sweats of the acute variety are present, though to a much less extent; one or more joints become affected for a long time, the conditions being almost stationary. Exacerbations are not uncommon, and they are liable to occur from slight causes or without any evident cause at all; but I would here state it as being very probable, as it seems to me, that the predisposing cause above mentioned in

connection with the acute variety is present here, though in a less degree. A case illustrative of this variety, which came under my notice a short while ago, I will now relate: The patient, enjoying previously tolerably good health, was rather startled at finding himself suddenly attacked with moderately severe pains in the left wrist and right shoulder. Mere limited motion of these joints resulted in severe pain; the wrist was very tender and swollen. Coincident with this was the occurrence of profuse perspiration of a rather yeasty smell, which I tested and found very acid. Urates were abundant in the urine, which was very scanty, and high coloured. There was considerable stomachic acidity and heart-burn; a sensation of burning in the mouth and lips; saliva very acid; heart's action much excited and weak but no murmur; pulse quick, full and easily compressible; temperature varied from 100 to 101; most of the time it was normal. The condition lasted for some time, presenting well marked remissions and exacerbations, and was not easily amenable to treatment. One feature of the case worthy of remark was that alcoholic stimulants invariably increased pain and tenderness in the affected joints. It was found too that the administration of potassæ bicarbonas invariably resulted, after a time, in an aggravation of most of the symptoms. The following mixture was found of great benefit:—℞ acid nitrohydrochlorici diluti ʒ iij. tinct. cinchonæ co. ʒ ij., aquæ ad ʒ vj. M. ʒ ss. t.i.d. The acid was given as an oxidising agent. The subsequent use of twenty minim doses of tinct. ferri mur proved of great service. There can be no doubt that ferrum is exceedingly useful in this variety, as also in the acute. There was little need of local treatment, which, when adopted, consisted of the application of a small piece of flannel. But the results obtained by the use of nux. vomica in this case have led me to determine to try it singly in similar cases, after abatement of any vascular erethism present, and where there is deficiency of nerve power—as is very likely to be in subacute cases. In this variety the joints are not much deformed, nor are they structurally altered to any great extent.

The general condition is usually much below par, and although the nutritive and eliminatory processes are not so much disturbed, although the retrograde tendency is not so well marked as in the acute variety, yet this form is commonly very troublesome, and the treatment must be preeminently supporting. Quinine and iron, I believe to be very efficacious; and here I would note the peculiar action of the

tinct. ferri perchloridi in cases where the urine is scanty and the urates are abundant:—It acts as a diuretic in consequence of the presence of a peculiar ether formed with the spirit by an excess of hydrochloric acid used in the preparation of the tincture (Headland). The urine by the use of this preparation soon becomes clear, &c.—this I have myself observed. But it is remarkable what beneficial results are to be obtained by abstinence from all active medication.

I shall now conclude this subject with a few remarks on the treatment of rheumatic fever and heart complications. And as I do not intend, in accordance with the plan of this effort, to enter into a review of all the various modes of treatment generally given in books, but merely to make general observations in conformity with the views here advocated as to the pathology and etiology of the affection, a very few more remarks will close this subject:—That now generally advocated is the alkaline treatment. It consists, as advised by Dr. Garrod, Dr. Fuller and others, in the administration of from grs. xx-lx. doses of the bicarbonate of soda or potash. Dr. Garrod recommends the beginning at once with gr. xl. doses and continuing until the system is brought entirely under the influence of the alkali. In addition to this, pain is to be relieved by the administration of opium and belladonna. The alkali may be administered in the form of an effervescent draught which renders it more pleasant. Now, I would here state that I deny the *curative power*, as such, of alkalies in this disease. I would be distinctly understood that I do not deny that they are preeminently indicated here; what I do question is the credit which is given them as being *the dynamic agents* in the cure of the condition known as inflammatory rheumatism. I maintain that scarcely is there another disease in which *nature* is to be more relied on to readjust her deranged processes than in this affection. Hence (although I think the principle of non-interference in this disease to be reprehensible) some physicians have been lately advocating the leaving the disease pretty much to itself. I maintain that the unquestionable value of the alkaline treatment is to be sought on *chemical ground* principally. That the system in this disease needs the *chemical action* of the drug, must surely be admitted, although cures have been repeatedly effected without it. But I do not think it can be proved that every chemical remedy is necessarily a *curative* one. Nay, I further believe that the incautious use of these drugs in this affection frequently entails on the patient an after-life of

suffering and sorrow. And in this disease it is particularly the object of the physician to prevent if possible the occurrence of heart complications; and if these exist when first he sees the case, to as speedily relieve them as possible, if they can be at all. Now an alkali given will most assuredly, amounting to an almost mathematical certainty, render the blood and some of the secretions alkaline, which is just the thing to be desired. But let us suppose this is carried too far, as is very apt to be in those cases in which the acid poison is being rapidly produced in the system, and which therefore implies alarming nutritive and eliminative disturbances, what is the result? I believe that in a large number of cases the patient's system has been so lowered by this excessive medication as to lead to permanent disturbance of the nutritive functions. Hence these patients are afterwards liable to severe hemorrhages of some kind or other. Dr. Headland states that "alkalies dissolve organic compounds of the albuminous group and prevent the coagulation of fibrin. In excess they retard nutrition and cause sparseness of the system." But again, unless these ponderous doses are given, the action of the heart and the general inflammatory condition will not be brought under sufficient control, which is greatly to be desired in this disease. For the more rapid the circulation, the greater the vascular erethism, the more likely is the *poison* to be freely distributed in those tissues which it is particularly desired should escape implication, viz., the serous membranes of the heart, and thus these serious complications might entail very great after-suffering, or speedy dissolution. This is very like being on the "horns of a dilemma." It is well known that this vascular erethism is the result of the effort of nature to *right* herself. But it is equally well known that nature sometimes overacts her part; and then it is the duty of the physician to bring in art to aid her by moderating this erethism and leaving her alone pretty much to effect the cure which *she alone* can. I think that this can best be done by the judicious administration of the following remedies:—Aconite, digitalis, or veratrum viride; given, not in the ponderous doses generally used, but in very minute doses, as, e. g. tr. aconiti (Fleming) gttss j. e. q. h., just sufficient to control the vascular erethism but not to the extent of depression. White bryony used in conjunction with this has obtained much repute with some physicians. The cautious use of the alkalies, I think unobjectionable, although, as I have said, cases get well without them. Scarcely in any other disease are there so many "lines of treatment" as in this.

And almost every physician can report remarkable cures from *this* plan and *that* plan. This is, no doubt due to the fact, as I have already stated, that the essence of the disease consists in certain deranged processes which nature alone can rectify.

I need not state that bleeding and means adopted to secure extreme diaphoresis recommended by some; the calomel and opium to the extent of ptyalism are all to be strongly condemned. For, as one author observes with respect to the former:—"The relief is but slight and transient, but the evil is decided. The tendency of the disease is to impoverish the blood of red globules, increasing the tendency to chronic rheumatism, prolonging convalescence, increasing the danger of internal inflammations; of internal effusions into the pericardium and pleura and to the synovial sacs of the joints, troublesome cases of delirium which do not occur under other treatment; it also predisposes to carditis and endocarditis; and these affections, arising in a case in which bleeding has been practised, are much less manageable than in others who have not been bled." Again, the same author observes with regard to the person pronounced cured by calomel to salivation; he has "loose teeth, ulcerated gums and all the painful and offensive accompaniments of ptyalism; as bad or worse than the original disease. And then it does not in the least guard the patient against the accidents of internal inflammations, pericarditis, endocarditis, pneumonia, pleuritis and peritonitis." Lime juice has been much vaunted as a remedy in this disease, no doubt as an oxygen carrier to the specific materies morbi, to facilitate their oxidation. On the same principle the acidum nitrohydrochlor. dil. has been recommended. The nitrate of potash, iodide of potassium, phosphate of ammonia, benzoates, sulphur and guaiacum, &c., I will only just mention as remedies which have been used.

The nitrate of potash as used by Dr. Basham, gives it is said excellent results. Quinine and tincture of steel have also been used. The latter, I think especially useful. Dr. Awenarius, of St. Petersburg, speaks very highly of *Propylamine* or tritylia, a volatile oil which is one of the products resulting from the destructive distillation of bones and other animal matters, usually from herring-brine. The doctor says he used this remedy in 250 cases of rheumatism, and in every case the pain and fever disappeared the day after its administration. The dose was twenty drops every two hours. Time will not permit me to mention other internal remedies recommended, except *opium* which has been lately much vaunted. While it certainly

controls the pain and restlessness, procures sleep and sustains the nervous system, yet its property of increasing the cutaneous transpiration would seem to be an objection to its use. For it has been found by Dr. Loman of the Liverpool Northern Hospital, that "the worst rheumatic cases are those in which perspiration is most profuse;" and that great improvement follows diminution of perspiration, which is not an eliminative effort of nature to be encouraged. In these cases he has only seen lime-juice fail in one case. In cases where the disturbance is not great and the heart not implicated, I have seen the alkaline treatment followed by subsidence of nearly all the symptoms in twenty-four hours. This has occurred at the Montreal General Hospital. But it is in the severer cases that this remedy, when given its true value, will be found not to be so curative after all.

The local treatment:—"The use of large blisters applied completely round the limbs and close to the affected joints has been strongly advocated by Dr. Herbert Davies. This is to be followed by the employment of large linseed poultices to promote the discharge of serum. No medicines are to be given. If the evidence of patients is of any value, this practice must be considered as a very successful one." (Tanner.) I would call particular attention to this quotation as it would seem to corroborate the view here held as to the grand agent in the cure of this affection, *nature herself*; and that "*nimia diligentia*" may have its place here, as it regards medication, as in obstetrics or surgery. The above local mode of treatment has been much praised, and it seems that by its use pain is speedily relieved and the duration of the attack is greatly shortened. Merely wrapping the affected joints in cotton batting and covering this with oiled silk I have seen attended with relief of pain and discomfort. In a case of my own a piece of spongiopiline smeared with linimentum belladonnæ and applied to the knee-joint gave speedy relief. Hot alkaline applications and iodine for swollen joints are excellent remedial agents. Fomentations of poppy heads hold their place here. But on the whole it is desirable that cotton wool alone should comprise the local application, and very little more will be required as a rule. I need not add that studious avoidance of exposure is necessary, and suppressed perspiration of the articulations is prejudicial to a local cure. The diet should consist generally of slops at first; but when there are signs of depression the whole regimen should be eminently *restorative*.

Saccharine, amylaceous and oleaginous diet is to be interdicted.

A Case of Traumatic Tetanus, treated with Potassium Bromide and Chloral Hydrate. Recovery.
By E. H. TRENHOLME, M.D., B.C.L., Professor of Midwifery and Diseases of Women and Children, University of Bishop's College.

Read before the Medico-Chirurgical Society of Montreal.

The nature of tetanus and its cause are so little known that we can hardly wonder at the unsatisfactory and opposite modes of treatment that have been adopted by different persons for its cure.

Remedies much relied upon, and strongly recommended by able men, have been found unavailing in the hands of others.

The discovery of new remedies have raised hopes that have been rudely dashed to earth by the crucial test of experiment.

The so-called anti-phlogistic treatment, so highly esteemed and trusted, in former times, is now superseded by the more rational sedative treatment, although it must be owned that some of these remedies have not realized what might have been expected of them from their known physiological action, e. g. opium and nicotina.

Chloroform, or rather chloral hydrate, is now enjoying some reputation and coming into more general favor.

Antispasmodics of all kinds have been tested with unsatisfactory results.

The calabar bean, possessing the power to paralyze the voluntary muscles, gave promise of great success, that has been followed by great disappointment.

Woorari acts on the motory nerves and paralyzes them sooner than the sensory nerves; just the desired remedy; but, alas! it, like the others, have failed to save life, although Dr. Dunne reports the cure of a case while using it. The chief value of this remedy lies in its power to prevent spasms, which allows the disease to run its course before life is destroyed.

PATHOLOGY.

The p. m. appearances in both, muscles and nerves vary much, according to the severity and duration of the disease.

The body is found to be usually rigid, the muscles firm and contracted, and occasionally ruptured, but in some cases no rigidity at all.

In a case under my care some years ago, there was general rigidity, and the nerve from the site of injury

(the first phalangeal articulation of the great toe), was inflamed along its whole course up to the cord, and thence to the base of the brain. There was also intense meningitis and serous and bloody effusion into the membranes of the cord; also well marked congestion of the vessels at the base of the brain.

The cord was very vascular, especially in the region of the cervical vertebrae.

Dr. Dick n (51 vol. *Med. Trans.*, p. 265) gives the p. m. appearances in a case where death supervened in 18½ hours. The cord presented three enlargements, one in the cervical and two in the lumbar region. The morbid changes were: first, a general injection of the cord, with dilatation of the blood vessels in the grey matter more than in the white, and in the left posterior horn more than in the rest of the grey matter. Second, a structureless transparent exudation had been poured out around the blood-vessels in many situations, and had been the chief cause of the extended swellings by the displacement it had occasioned. Third, There were certain circumscribed changes in the white columns."

The cause of this disease is very obscure.

"Some attribute it to a peculiar kind of irritation, which acts on the excito-motory apparatus, that the irritation may be eccentric, at the extremity of, or in the course of the afferent spinal nerve; or it may be centric within the spinal canal itself." "Some think it to be an exaltation of the polarity of the cord and medulla." "Others that it is identical with inflammation of the spinal cord and medulla oblongata, and adduce cases of inflammation of these structures as causing symptoms of tetanus."

"It has been suggested that it is due to a morbid state of the blood, inasmuch as it resembles in some respects those diseases which are produced by poisonous agents, as strychnia, hydrophobia, woorai, &c."

Dr. B. Richardson classes it with zymotic diseases and states "that, in his opinion, the poison is first developed in wound as result of decomposition, thence is carried into the circulation. The new substance, without any necessary increase of its own parts, excites a zymosis, ending in the production of an alkaloid, or alkaline body, which has all the power of exciting the symptoms of spasm as much as strychnia itself."

The subject of these remarks, John D—, aged 19, of medium stature and spare habit, received a small glass wound on 15th October, 1874, over the metacorpo-phalangeal articulation, which healed up in the course of a few days. On the 29th October, the patient called upon me complaining of difficulty in

swallowing. Examination of the throat shewed very slight congestion of the pharynx, and as he had frequently been treated for the same thing, I brushed out the fauces with tr. capsici and gave him a chlorate of potash and glycerine gargle.

On 30th October I received a message to visit him, and, as he was at dinner when I called, and felt no trouble in the throat except when swallowing, and was at that time somewhat easier, I gave no serious thought to the case, but ordered the gargle to be discontinued and hot fomentations to the throat externally; glands of fauces enlarged.

October 30th, marked trismus and difficulty in deglutition and respiration.

31st, 10 a.m.—The spasms are frequent. Examined the site of injury on thumb, and, on pressure a drop of pus escaped from wound. As it was swollen, red and tender, applied muriatic acid and had it poulticed continually. Prescribed 20 grs. pot. brom and 15 grs. chloral every three hours; also gave half drop doses aconite every hour. 5 p.m. Dr. Kennedy saw the case in consultation with me. Was easier, but there is well marked opisthotonos. Any attempt to move patient brings on a spasm. The spasm of diaphragm at times threatens to destroy life by apnoea; urine somewhat scanty.

1st Nov.—Had a bad night but feels easy this a.m.; spasms chiefly confined to diaphragm.

2nd Nov., a.m.—Passed easier night, and can open jaws wider than could yesterday; can swallow milk; muscles of legs very tense. P.M.—Is slightly delirious; spasms very severe, and more painful in back of neck than elsewhere, although the diaphragm is still much affected. Increased the dose of the bromid and chloral to 25 and 20 grs. respectively. Can open mouth to the extent of about a quarter of an inch.

Nov. 3rd., a.m.—Skin hot and dry; takes food pretty well; spasms less severe than yesterday; slept for two hours on right side.

Nov. 4th.—Passed a good night; pains felt severely along lower part of spine, but of short duration. There is a foetid discharge from wound. A spicula of glass was removed with one of the poultices. Applied muriatic acid, and followed it with tobacco leaf on hot poultices. P.M.—The spasms last two or three seconds only, and are not very severe.

Nov. 5th.—Bowels painful, and as they had not been moved since the 31st ult., gave ol. ricini. Countenance less anxious and feels easier.

Nov. 6th.—Spasms very severe and prolonged. Applied mustard sinapisms followed by Empl-Bel-ladon to cervical spine and between shoulder blades.

Nov. 7th.—Bowels freely moved, after which was much easier; spasms slight.

Nov. 8th.—Spasms severe in back; countenance anæmic color.

Nov. 9th.—Spasms easier, and had a good night.

Nov. 10th.—Passed best night he has had since he took ill; skin cool; spasms slight, and felt in left leg only; slept well.

Nov. 11th.—Had a restless night; pains in back very severe; spasms frequent; changed the chloral for lupulin as blood was getting poor.

Nov. 12th.—Not so well as yesterday; great tension of tensor vaginae femoris muscle; returned to the chloral once more.

Nov. 13th.—Passed a fair night; slept pretty well; feels easy this a.m.; spasms short.

Nov. 14th and 15th.—Spasms not so frequent and slight.

Nov. 16th.—All going on well; eats heartily.

Nov. 17th.—Spasms returned, and are very severely felt in right shoulder.

Nov. 18th.—Had spasms in the heart which threatened instant death. The agony was intense; in other respects doing well.

Nov. 19th.—Passed easy night; had but two severe spasms and one general tonic spasm. Omit the mixture and take of morph. mur. gr. $\frac{1}{2}$ every 6 hours.

Nov. 20th.—Doing well; pupils contracted. Returned to the mixture for the day, and to take morph. at night only.

Nov. 21st.—Pain confined to right shoulder. Sat up on edge of bed for a few moments. Eats well.

Nov. 22.—Doing well. Lies on side with ease. Eats well.

Nov. 23rd.—Not so well; restless night; breath short. Is low spirited.

Nov. 24.—Respiration easy; can turn on side alone, and touch forehead with his left hand.

Nov. 25th.—Spasms slight and far between; shoulder still stiff and tender.

Nov. 27th.—Muscles relaxing; spasms slight, and two or three hours between each one. Can open mouth well.

Nov. 28th.—Had no severe spasm since yesterday.

Nov. 30th.—Increased muscular relaxation and entire cessation of spasms.

From this time forward continued to improve and has quite recovered health and strength and been able to resume his occupation as mechanical engineer.

REMARKS.

During the severity of the disease mustard sinapisms to the spine always gave immediate relief. The

bella-donna plaster was then applied on the reddened surface and acted well.

Attention to the local wound was also followed by relief of the pains which were felt to extend from the wound up the arm.

One remarkable feature of this case was the attacks upon special muscles seriatim, especially the heart.

DR. KENNEDY did not consider that there was any necessity of supposing that tetanus was due to the formation of a new poison in the wound or blood. If the position of these wounds was taken into consideration, it would be seen that in the majority of cases they were situated in portions of the body supplied largely with sensitive nervous filaments, as in the hand or foot. Any continued irritation of these excito-motor nerves would tend to produce reflex motions, which if lasting for any time would generate alteration of structure in the spinal centre and thus become continuous.

In the case before us it is stated that a piece of glass was removed from the part after the wound had healed. Besides, the time which intervened between the reception of the wound and the accession of tetanus would preclude any formation of a new poison. There was another point to be noticed, and that was the absence of any induration or inflammation in the surrounding lymphatic glands and ducts, which would have been the case had any septic material been absorbed. Taking the different cases mentioned we find no regularity in the appearance of tetanus; it may appear early or late, and where there was no external injury.

The well-known fact that irritation of a sensitive or excito-motor nerve is capable of producing reflex muscular action should be sufficient to account for these spasms, and in tetanus either the foreign substance has remained in the wound or else the nerve has been implicated in the cicatrix, and thus keeping up irritation.

At present he had under his care a lady, who for years had suffered from time to time with what may be designated as hysterical tetanus, but which presented as violent symptoms as it was possible to have in any case of traumatic tetanus, though not so long continued. In this case the cause was evidently uterine. She had suffered greatly from dysmenorrhœa, which condition had been relieved by free incision of the os uteri, but which did not relieve the spasms. These latter were something extraordinary, the opisthotonos was extreme, and even the occipital portion of the occipito-frontalis bulged out in a

state of extreme rigidity. Chloral had been given in large doses, but did not seem to have exercised much curative action, but had controlled the spasm. Benefit had been derived from the administration of bromide of ammonium, thirty grains every three hours. The characteristic eruption was a long time in appearing, but no ill effects were observed from its long continued use in large doses.

Dr. PROUDFOOT mentioned that he had seen a number of cases of tetanus in hospitals in this country, and during the late Franco-Prussian war, only three of which he knew to have recovered. They occurred while he was House Surgeon of the City Hospital, Boston. The treatment in these cases was bromide of potassium in large doses combined with the free administration of whiskey, beef tea and milk punch; with an occasional dose of morphine (hypodermically) to relieve pain. The bromide was given in doses of from 40 to 60 grs. an hour until the characteristic eruption was produced; after which the paroxysms became less frequent and of shorter duration, finally ceasing altogether, the patients making good recoveries. The 1st case occurred in a carpenter *æt.* 18, who got a nail in the ball of the great toe of the right foot; 14 days after the injury the wound being quite healed and not sensitive to the touch.

The 2nd case was that of a man *æt.* about 45, with a bad comminuted fracture of the thigh.

The 3rd case a boy *æt.* 13, who got a heavy blow over the spine from a base ball club. The cases recovered perfectly.

While in Darmstadt during the war he saw a few cases with Dr. Keller, Surgeon in charge of one of the large Hospitals for wounded soldiers, and recommended the "bromide treatment"; which the Dr. at once began on all the cases under his care. Up to this time there had not been a single recovery from tetanus in the Darmstadt Hospital.

Dr. Proudfoot regretted that he was unable to state to the Society the result of Dr. Keller's cases, as he was obliged to leave for Frankfort-on-the-Maine the following morning, and did not return to the city.

Dr. WEBB stated that he had treated a case last summer, (a half starved pauper boy from seven to eight years of age,) with calabar bean hypodermically. As he was called only three hours before his death, had no opportunity of fairly testing the remedy, but noticed that the spasms entirely disappeared in less than half an hour from the time of its first administration, although previous to that time they had been present almost continually for three days.

He died within ten minutes of the second injection (just seven days from time of accident;) it apparently made him die easier. The disease was induced by accidentally stepping on a rusty nail, the point entering the inner side of the ball of the right great toe.

In reply to Dr. Kennedy Dr. Trenholme remarked that his own views with regard to the pathology were more in accord with those of Dr. Richardson than any other writer upon the subject. As to whether an alkaloid substance was formed or not, he was of strong conviction from what he had seen that it was due to a septic agent formed at the site of injury and absorbed into the blood, and that this septic agent has a special affinity for the spinal nervous system. In support of this view he remarked that in a former case he found a spicula of wood imbedded in the tissue over the metataro-phalgal articulation of the great toe, surrounded by a small amount of pus. This was the source of the trouble, and the nerve congestion could be traced up to the spinal column and base of brain. The most marked pathological changes were found in the cervical region. In the present case a drop of pus was found under apparently perfectly healed tissue, and when this was removed the irritation extending from the wound up the arm was greatly relieved and finally entirely closed.

So far from the interval that supervened between the reception of the wound and the supervention of the disease precluding the idea of the formation of a new poisonous agent, it strengthened such conviction in his own mind. The condition of the wound in both of his cases was proof of such possibility and probability also.

It did not militate against the theory of absorption because the lymphatics were not observed to be enlarged, &c. That they were not affected is assumed and not proven, and even if not affected septic agents find ready access to the blood by other means than the lymphatics, as for example by the lungs. In the case of traumatic tetanus the poison could be taken up by the veins by imbibition, or might act on the blood in the capillaries so as to cause an altered condition of that fluid.

With regard to Dr. Proudfoot's remarks Dr. Trenholme thought the use of large doses of bromide of potassium while most valuable was not so effectual in allaying the spasms as when combined with chloral. In support of this view he remarked that when the chloral was omitted from the mixture, the spasms returned with increased violence, and were assuaged promptly when given again.

Dr. Trenholme attached much importance to the

use of mustard sinapisms to the spine followed by the emplastrum belladonna.

Correspondence :

TORONTO, March 25th, 1875.

Editor Canada Medical Record.

DEAR SIR,—As a member of the Canadian Medical Mutual Benefit Association, and feeling an interest in its welfare, I wish to draw the attention of the members of the profession who are still with out its pale to the fact, that it is a real live institution, and that its members are sparing no pains to ensure its success.

It is destined to supply a much felt need, and ought to be the means of drawing the profession together in one strong bond of unity; and we should feel a common interest in supporting and building up an institution which, in its way, is likely to be productive of so much benefit.

As one applicant expresses himself: "He does not think it has come into existence one moment too soon, as especially in the outlying sections of the country the medical men cannot hope to provide a competency for those depending upon them in case they were suddenly taken away; and the organization presents an opportunity that should render the profession in general grateful to its originators."

Nor need we go to the newly settled districts to find members of the profession who need the benefits the Association affords, as is evidenced by the fact that an appeal is about being made to all the registered practitioners in Ontario to raise a fund to relieve the straitened circumstances of the family of the late Dr. Lizars, of Toronto.

On the ground that the late Dr. was a registered practitioner, this action cannot be called in question, and ought to receive our hearty encouragement and liberal support.

But, on the other hand, it should not be forgotten that this is establishing a precedent, which, for the same reason, should have been established long ago, and must, therefore, follow every such lamentable occurrence in the future, as the death of a regularly qualified medical practitioner.

But we would scarcely like to place ourselves in such relation to each other, or in such a position in the world, as a course of this kind would necessarily and inevitably involve.

We could, however, by building up and keeping well managed and supported such an association,

have an amount which would be very acceptable to the representatives of a deceased member, and which we could claim as a right, and just due, and not have to feel towards our brethren that it was doled out to us as a charitable pittance; and to the outside world that such is the result of the efforts of a lifetime spent in unremitted and unrequited toil.

The Association furnishes every qualified practitioner with a blank form of application, and while we are pleased with the readiness with which a good number promptly filled up and returned them, still there are many others from whom we have yet to hear, and probably in most cases from indifference.

To such we would that you give the matter your earnest attention, and forward your application.

Yours truly,

MEMBER.

Progress of Medical Science.

PRACTICAL INDICATIONS TO BE DRAWN FROM THE STATE OF THE PUPIL DURING SURGICAL ANÆSTHESIA.

M. P. BUDIN, in an article in *Le Progrès Médicale* (Sept. 5, 1874), says that he has endeavoured to discover some sign which might serve as a guide in the administration of chloroform, and which would indicate the state of sensibility during its administration. Observation and experience have led him to the following conclusions:—

1st. There exists in surgical anæsthesia produced by chloroform a constant relation between the state of the pupil and the period of anæsthesia.

2nd. During the period of excitement the pupil is dilated.

3rd. This period having passed, the pupil contracts; this atresia is well marked, and continues for several minutes, accompanied with complete general anæsthesia.

4th. The dilatation of the pupil coming on during an operation indicates in general, either that the anæsthesia is less profound, or that the return of sensibility is approaching.

5th. The state of the pupil, then, may serve as a guide in the administration of chloroform.

6th. During operations which last a long time, if it be wished that the patient should be insensible and motionless, the anæsthesia should be so managed that the pupils continue constantly contracted.

7th. Finally vomiting may produce dilatation of the pupils, cause the insensibility to disappear and the patient to awake; it annuls, in part, the effects of the anæsthesia.

HOT WATER VAGINAL INJECTIONS IN UTERINE DISEASES.

Dr. Emmet, surgeon to the Woman's Hospital of the State of New York, in the course of a paper on "The Philosophy of Uterine Disease" (*New York Medical Journal*, July), makes the following remarks on the value of hot-water vaginal injections: — In this simple remedy, he says, we possess the most valuable means of relief when properly administered. Although it has now been many years since this remedy was first introduced into practice, but a small portion of the profession appreciate its use or understand its action. It is generally conceived that the application of heat by this method relaxes the vessels and increases the congestion. This it does at first, but if prolonged, the capillaries are excited to increased action; as they contract, the tonic stimulus extends to the coats of the larger vessels, their calibre becomes lessened, and, with an approach to healthy action, the congestion diminishes. No one applies a hot poultice with the view of increasing the congestion of the parts, but, as any old woman would explain it, "to draw the inflammation out," that is, to lessen the congestion by causing contraction of the vessels. That such is the effect of the continued use of a poultice is shown by the bleached and wrinkled appearance of the tissues after its removal. We can cause capillary contraction also by the use of cold, and the effect is even more prompt, but, when reaction comes on the tissues will become more congested than before. In brief, the immediate effect of cold is contraction, and with reaction we always have dilatation; heat, on the contrary, causes dilatation at first, and its action is followed by contraction afterwards. If a woman be placed on her back, with the hips elevated by a properly-shaped pan under her, and a gallon or more of hot water at 98° or of a higher temperature be slowly injected into the vagina by means of a Davidson's syringe, the mucous membrane will become blanched in appearance, and the canal as diminished in size as if a strong astringent had been administered. While the hips are elevated, the vagina will retain, during the injection, a large quantity of water, which by its weight will distend every portion of the canal, so that it will come in direct contact with the whole mucous membrane under which the capillaries lie. The vessels of the neck and body of the uterus pass along the sulcus on each side of the vagina, and their branches encircle the canal in a most complex net work. The vessels of the fundus, through the veins of which the blood passes by the liver back into the general circulation, communicate with those below by anastomosis. We can thus, through the vagina, influence directly or indirectly the whole pelvic circulation. We can so diminish the supply as not only to check congestion, but we can liberally, by the use of hot water, starve out an inflammation. I know from my own personal observa-

tion that several of these injections a day, at 100° to 106°, will abort an attack of cellulitis if resorted to early enough, and their use persevered in with the aid of rest and anodynes. These injections exercise a most beneficial effect on the reflex system by allaying the local irritation. I know of no better means for removing the nervousness and sleeplessness of an hysterical woman than a prolonged hot water vaginal injection, when administered by an experienced hand. These injections will frequently soothe a patient to sleep in less time than could be done by any anodyne in the pharmacopoeia. To receive permanent benefit from their use, they must be continued until the patient is restored to health. They should be given at least once a day, and the best time is on retiring at night. The only position in which the patient can receive any benefit from them is on the back, with the hips elevated, as I have described. She cannot administer them properly to herself, and I know of no arrangement, by syphon or other means, which can take the place of an intelligent nurse. As the patient improves in health the quantity of water can be diminished, and the temperature lowered until the injections are discontinued from daily use, but for some time they should be employed for a few days after each period.

CYSTITIS IN WOMEN.

Dr. J. B. Hicks (*British Medical Journal*, July 11, 1874), in a valuable paper on the local treatment of cystitis in women, considers that but little dependence is to be placed on the efficiency of internal remedies, unless indeed an exception be made in favor of these medicines which are able directly to alter the acidity or alkalinity of the urine, as the case may be. Opium he considers as the most valuable remedy, not only because it relieves the pain which is so serious a symptom of the disease, but also because it has a decided effect in lessening reflex sensitiveness.

In all cases of severe acute cystitis, characterized by pain, by a frequent or constant desire to micturate, by severe scalding along the urethra during micturition, by a constant and intolerable bearing down, and by a urine loaded with mucus, pus, and blood, the first thing to be done is to ascertain the reaction of the urine. As a rule it will be found to be alkaline, although before pus appears in the urine it may be acid. If it is acid and ammoniacal, pass gently a gum-elastic catheter (open at its end instead of its side) into the bladder; draw off the urine; withdraw the catheter just without the neck, when the bladder is on the point of being emptied; then, by means of a syringe, wash out the bladder with warm water slightly acidulated with nitric, hydrochloric, or acetic acid (two drops of the acid to an ounce of warm water); inject until the patient expresses a desire to micturate, when the injection may be allowed to escape. This injection is to be repeated until the urine seems clear of phosphates and mucus; usually

about half a pint of acidulated water will be found sufficient. Having thus washed the bladder clean, inject about a grain of morphia dissolved in an ounce of water. Withdraw the catheter, instructing the patient to retain the injection as long as possible. In all cases allow the catheter to rest just without the neck of the bladder, using force enough to carry the injection through the sphincter into the bladder. This treatment should be repeated twice daily. In cases where the urine is not markedly alkaline, the bladder may be washed out with a warm solution of permanganate of potash, instead of the acidulated water. After a few days of this treatment, a solution of chlorate of potassa (four grains to the ounce) may be used in place of the permanganate of potash, and afterwards the morphia solution. Where there is no blood in the urine, nor any constitutinal effects experienced from the morphia, two grains may be used instead of one.

As the acute symptoms subside, more astringent washes may be used, such as tannin (three grains to the ounce), or three or four drops of solution of perchloride of iron, the morphia injection being used subsequently. In cases where the urethra becomes very tender, it is well to omit the catheterization for a day or two. If after the main symptoms subside the urethra still remains tender, a bougie, smeared with tannin and dipped in gum-water before using, may be introduced with decided benefit.

In cases where the cystitis has become chronic it is well to use a solution of nitrate of silver (from five to ten grains to the ounce) or perchloride of iron (ten minims to the ounce) before injecting the morphia. This application is to be repeated a week later.

In the acute stages the warm hip-bath and sponging of the genitals, with perfect rest in bed, are to be insisted on, and no alcoholic beverage whatever is to be allowed.

Dr. J. Goodman believes that by far the best treatment of this class of cases is the insertion of a drainage-tube, thus preventing the retention of any urine in the bladder. The tube must be removed every three or four days for the purpose of cleaning it, which is best accomplished by placing it in acidulated water.—*Boston Medical Journal*.

TREATMENT OF ERYSIPELAS.

Dr. Satterlee, in the *N. Y. Med. Jour.*, advises the quinine and opium treatment. "It consists in the administration of one, two, or three full doses of the sulphate of quinine combined with enough tincture or elixir of opium to moderate the disagreeable effects of the quinine upon the head, and to assist sleep. If called at the beginning of an attack of erysipelas, I administer to an adult, twenty-five to thirty grains of the sulphate of quinine, dissolved in one and a half ounces of water, which is readily accomplished by the addition of a little dilute sulphuric acid; a few drops will completely dissolve the powder, and a clear solu-

tion will be formed; to this I add fifteen minims of McMunn's elixir of opium, and we have a draught which, although very bitter to the taste, is not so disagreeable to take as a small powder of quinine; in fact I have on one occasion administered sixty grains of quinine dissolved in three ounces of water, in one dose, to a patient with a very obstinate and long standing intermittent fever, and the remark he made to me some time afterward was that 'he was so glad that I had given him that draught *instead of quinine*, as he had taken a great many quinine-powders for over two years, and they were unpleasant to take, without doing him much good.' Having ordered a draught as just stated, containing twenty-five to thirty grains of the sulphate of quinine, direct the erysipelas patient to take it all at once on retiring for the night. It will usually be retained by the stomach without difficulty; if, however, the stomach is irritable, I prescribe mustard-plaster about the size of the hand, to be applied, ten or fifteen minutes before taking the dose, under the left breast; this procedure I have found unailing in quieting the stomach so that the draught is retained. In one case when the fauces were greatly inflamed and deglutition very painful, I had an equally good effect by administering the dose by the rectum. After this draught the patient usually has a very good night, sleeping well and perspiring freely; and on examination after twenty-four hours, we find the temperature and pulse have fallen greatly. The general symptoms have either disappeared or been much improved. In some cases we have deafness and noise in the head from the quinine, but in the majority of instances the opium seems to remove entirely the after effects of the drug. The eruption markedly diminishes, and I have seen many cases where a single draught has completely aborted the disease. In all cases I direct the patient to observe simple hygienic rules, use a stimulating diet, with free draughts of lemonade where there is biliousness, a simple cathartic in constipation, and no external application whatever.

This is my treatment in the incipency of a mild attack of erysipelas. But in any and all the varieties and severer forms of the disease, or when I do not see the case until it has advanced several days, I commence treatment in the same manner, but, at the end of twenty-four hours, or on the second evening of my attendance I administer a second quinine draught, and if necessary a third at the end of forty-eight hours. In my experience this has been entirely successful in the most severe types of the disease, the eruption and general symptoms passing away with rapidity. The patient makes an excellent recovery under this mode of treatment, the appetite comes speedily, and there is very little debility experienced. Twenty-four or at most forty-eight hours is all that is required to abort the disease by this treatment. Having used it for three years in a large number of cases, I have never found any disagreeable after effects; on the contrary the general health of the patient is improved, and this is the experience of all those whom I have known, who have employed this plan.

TWO NEW DIFFERENTIAL SIGNS IN DISLOCATION OF THE SHOULDER.

BEING A PORTION OF A CLINICAL LECTURE DELIVERED AT BELLEVUE HOSPITAL, AFTER THE PRESENTATION OF A CASE OF SUBCORACOID DISLOCATION.

By PROF. FRANK H. HAMILTON, M.D.

The examples of errors of diagnosis in the case of injuries involving the shoulder-joint are very frequent. My personal experience furnishes me with probably forty or fifty cases in which the head of the humerus has been supposed to be dislocated when it was not; or in which it has been supposed to be broken when it was not. For this reason it is important that you be informed of every known means of diagnosis; and to those which are already known and published I will now add two more, of which you will be able pretty often to avail yourselves.

When the head of the humerus is in its socket it projects outwards, beyond the extremity of the acromion process, from half an inch to an inch; varying more or less according to the age and size of the person. It projects also in front of the acromion process a little but not at all behind.

In case of a dislocation, in whatever direction the head of the humerus is displaced, there can be no bony projections outwards beyond the acromion process. This fact may be ascertained always, unless there is very great swelling of the soft parts over the point of the shoulder; but it will be necessary that you should be familiar with the natural outline of the acromion process, and this is a study which medical students and medical men too much neglect, namely, the study of the natural form of the surface of the body, or what I call "Superficial Anatomy." You must learn to know where is the outer end of the clavicle, where is the outer end of the acromion process, and where is the coracoid process, if you expect to determine the existence or absence of a dislocation of the shoulder. This exercise you can pursue in your bedrooms, on your own persons or on the persons of others. With a camel's-hair pencil, moistened with the tincture of iodine, you can mark out upon the skin the line of the clavicle, acromion process, spine of the scapula, etc. In attempting this for the first time you will probably find that there is much to learn that you did not know before, however thoroughly you have studied the anatomy of the shoulder in the dissecting-room, when the skin is removed. The same applies to all the other joints of the body; and now you will understand why some men, perhaps wholly ignorant of anatomy as it is usually taught, but familiar by long practice with superficial anatomy, will recognize in a moment the nature of a joint injury, which you may fail after a very careful examination to detect.

Let us return to the consideration of the two special signs of shoulder-joint dislocation (liable to only one exception, as I shall hereafter explain), which I wish to add to those already given by surgical writers.

First. While the head of the humerus remains in its socket, if a rule be laid upon the outside of the arm from the shoulder to the elbow, it will not touch the acromion process, but will be distant from it at least half an inch, generally one inch or more. On the other hand, if the bone is removed from the socket, in whatever direction it may be displaced, whether forwards, downwards, or backwards, unless the shoulder is much swollen, the rule, placed in the manner above stated, will touch the acromion process.

Second. If, standing behind the patient (in case of the right shoulder) the thumb and fore-finger of the left hand is made to grasp the top of the shoulder in such a manner as that the interdigital commissure shall rest upon the acromion process, just outside of the acromio-clavicular articulation; and if then the finger and thumb are dropped perpendicularly, the tip of the finger will (in case the head of the humerus is not dislocated) rest upon the centre of the round upper extremity of the humerus, as it projects in front of the acromion process, while the end of the thumb will rest upon the head of the humerus behind; but the head will be felt indistinctly by the thumb, for the reason that, instead of projecting as it does in front, it actually recedes a little beneath the acromion process. Up to this moment the surgeon may entertain some doubt whether he is actually grasping with his thumb and finger the head of the bone; but if he now moves the elbow of the injured limb forwards, so as to carry the head of the humerus backwards in its socket, he will feel it press strongly upon the thumb, and this will be conclusive. If a dislocation exists, the head of the bone cannot be felt in this situation, and by the thumb thus placed.

I have told you that both of these differential signs, in their application to shoulder-joint injuries, are liable to one exception. The phenomena would be the same, so far as these two signs are concerned, whether there was a dislocation of the head of the humerus, or a fracture with displacement of the neck of the scapula. The latter accident must, therefore, be first excluded by a careful application of the rules of diagnosis given in our treatises upon surgery; but that upon which you can most safely rely is the relative infrequency of the two accidents. It is doubtful, whether a long and active surgical practice will ever furnish you with an example of fracture of the neck of the scapula, while you will meet with a great many cases of dislocation of the shoulder.—*N. Y. Medical Record.*

INDURATED BUBO.

In the practice of the Philadelphia Hospital better results are claimed for the following method of treatment than any other that had been adopted:—Cover the part freely with mercurial ointment, and keep up constant pressure by means of a *hot brick*.—*N. Y. Med. Record.*

INGROWING TOE-NAIL.

Professor Sayre says (*N. Y. Med. Record*, Sept. 1.) that immense relief can be afforded by applying a few threads of cotton beneath the cutting-edge of the nail, in such a manner as to protect the excessively tender tissues from the irritation produced by being crowded in contact with it. When the cotton is properly applied, pressure upon the ball of the toe will give no pain. The proper instrument with which to apply it is a narrow thin knife-blade without cutting edge. With this instrument draw a few threads of cotton down between the nail and the mass of granulations, and so on until they are carried beneath the cutting-edge of the nail. This operation will give some pain during its performance, but the relief which will be afforded by it will be most marked. After the application of the cotton, pencil the fungous granulations over freely with nitrate of silver, or with whatever may be used for the purpose of destroying them. Repeat the application as often as the destroyed tissues separate, until the exuberant growth is all destroyed.

DENTITION AND LANCING THE GUMS.

BY JOHN WARD, M.D., GRANGE-OVER-SANDS.

As an advocate of the judicious use of the gum-lancet in alleviating the woes of infancy, I regret that the benefits to be derived therefrom are not more fully appreciated by the profession at large.

Not forgetting the influence of constitutional peculiarity; the susceptibility of the high nervous organization of many infants of the present day; the effects of diet; the influence of climate and its effects, as modified by clothing and indoor temperature; together with the benefit to be derived from well timed outdoor exercise, I have long noticed a remarkable effect on the progress of dentition—other things being equal—as influenced by geological formation. Not only have I found a most marked difference in the case of my own children during this period of development, according as their residence was on the mill-stone grit formation, or on the carboniferous limestone, in favour of the latter; but I have been struck with the comparative ease with which dentition is passed through by children generally located on the latter formation.

To what extent the soothing influence of the seair may exert a beneficial influence of the sympathetic irritations of this period, I am scarcely prepared to say. That water of a moderate amount of hardness is beneficial as an article of diet in such cases, as indeed during the period of the physical development of the organization, I think will be borne out by the test of experience. As an instance in point: a some-

what delicate child eleven months old, living on the outskirts of a town which is supplied with water remarkably soft from the gritstone, was confided to my care for a while during the recent summer; and, in the short period of four weeks, it cut the four central incisor teeth; the wind being north-east and the lancet repeatedly used. The lateral incisors and first temporary molars made rapid progress. Referring to the wind being in the north-east, I have observed that, during the prevalence or even the sudden accession of a north-east wind current, the teeth appear to make rapid advance, which advance, should the wind change, may as suddenly subside. This may more or less account for the perplexity which has overtaken others, as stated by Dr. Finlayson, who says, in his recent paper on the above subject in the *JOURNAL*, "that symptoms almost precisely the same as those usually attributed to teething were frequently observed before the time for the appearance of the teeth had arrived, and that these symptoms, at whatever age, frequently appeared and subsided without any fresh tooth coming to the surface."

It is during this teething impulse that the use of the lancet comes most timely to our aid, should any one of the frequent concomitant symptoms, such as diarrhoea, sickness, or tendency to convulsions, threaten; or should even the milder symptoms of irritability of temper, languor, etc., appear; and, on inspection, the probabilities in any degree in any degree warrant the conclusion, that the teeth may be at the foundation of the cause.

No absolute or precise rule can be laid down as to the exact age at which the irritations attributed to teething arise, some children being actually born with teeth. Some authors speak of two periods of irritation from teething one, when the tooth is deep down in the gum, surrounded with its fibrous envelope; and the other, just as it makes its appearance. Without exactly endorsing this view, I am inclined to think that the sympathetic irritations are most felt some time before the teeth are at the surface; and that it is from inattention to this, and when the lancet has been applied merely to those just about to emerge, that disappointment has been experienced and the operation brought into disfavour. If experience have not been gained by practice, it may require some effort to judge accurately which tooth or teeth need the liberating assistance of the lancet, as it is known that they do not always make their appearance in the same order; but there will generally be evidenced a fulness of the gum, and sometimes rotundity and redness of the free surface, with which practice will make familiar. Making exception of isolated cases, which rarely may occur, where the health of the child is impaired, the vascular system unduly relaxed, as in cases manifesting a tendency to scurvy, purpura, etc., my own experience would lead me to fear little from hæmorrhage.

I cannot agree with Dr. West, "that circumstances in which the use of the gum-lancet is really indicated are comparatively few", as it has often fallen to my lot to see unpleasant symptoms, varied in their manifestation, speedily subside upon the gums first being relieved, and then attention being

directed to the special concomitant symptom; as, for instance, in cases of diarrhoea, moist warmth to the abdomen, followed by the application of the flannel binder; and, when the infant is weaned, the substitution of the milk-whey diet for a time, taking care, on return to the ordinary food, that, should the raw milk prove purgative—as is often the case when the cows are fed on roots in the winter months—to recommend its being boiled previously to using. It is my firm opinion that, by the free and judicious use of this instrument, infant mortality might be very considerably reduced, and many untoward symptoms nipped in the bud.

In the choice of an instrument, my experience has led me to use Syme's abscess-lancet, enfolding all but about half inch of the end of the blade with a piece of tape or linen, which may be at hand, in preference to the ordinary gum-lancet; or one which Messrs. Wood of Manchester have made me to order, in shape like Syme's, but with a cutting surface of barely half an inch on the convex or upper surface near the point, and rather more on the under surface. This—taking care that it is scrupulously clean—when guided in the mouth, under shelter of the second finger, is very convenient, and enables the operator to make his incision just over the tooth, cutting down with nicety on the entire length of its surface, longitudinally, under ordinary circumstances, or crucially, especially in the case of the molar teeth, if the symptoms be urgent or the gum unusually tough.

The position of the child most convenient I have found to be, for lancing those of the lower jaw, an upright sitting one on the nurse's lap, the infant's head leaning against her breast, and she holding its hands; for the application of the lancet to the upper jaw, laying the infant on its back across the nurse's knee the operator standing at its head, taking care he has a good light. A drink of cold water is very refreshing to the little patient immediately after the operation.

I always endeavour to arm myself with the weapon, the judicious use of which I have been advocating, as it is one which I have found necessary to call into requisition much more frequently than any other in the *armamenta* of the surgeon, *British Medical Journal*.

DIPHTHERIA: A NEW TREATMENT.

BY H. V. SWERRINGER, M.D., FORT WAYNE, INDIANA,

I have had some experience in the treatment of this disease during an epidemic which visited the city of Fort Wayne, Indiana, the present winter (1874-5); and, notwithstanding the fact that what success I had, occurred in the latter period of the epidemic, which in all epidemics is usually considered the mildest portion, yet I cannot avoid attributing that success in a great measure to the change I adopted in my treatment; and I believe that I am warranted in so doing by the facts that the disease was yet at this time quite generally fatal, and that out of a number of severe and well-marked

cases I was so fortunate as not to lose a single one under my new treatment. I call it *my* treatment because I have never heard its theory suggested, nor have I seen it in print. I have not yet had an opportunity of testing its value in the *severest* or *most malignant* cases, such as occurred in the earlier part of the epidemic, but I feel confident that in a large proportion even of these, if adopted *early*, it will prove successful. The discovery which I have been flattering myself as having made—and it remains for future experience to establish its value—is, that *prompt cinchonism, followed by an alterative tonic, is, not absolutely a specific, the most proper and successful treatment for diphtheria.*

It may be said, however, that quinine as a remedy in diphtheria is not new; that it is almost invariably given in the course of the disease. This is true; but it is equally true that it has never been given with any specific object in view, other than its tonic or antiperiodic effect. It has usually, in fact, in this disease, been given on the "hit or miss" principle. The remedies commonly considered of the most value in the treatment of diphtheria are the muriated tincture of iron, chlorate of potassium, carbolic acid, and nitrate of silver; the former three, given both constitutionally and locally, the latter applied locally only. All the text-books which I have consulted seem to rely chiefly upon the above-named remedies.

It is the *condition* known as *cinchonism* which is produced by the administration of quinine in *positive* doses until its peculiar physiological effects are induced to a *marked degree*, that I contend is the *first grand object to be accomplished in the treatment of diphtheria.* This statement is based upon the confidence I have in the antiseptic properties of quinine if *properly administered*, and the belief that when the condition of cinchonism is fully established, the septic poison in the circulation is then neutralized; and this belief is founded on the *fact* that in every case that I have thus treated, just so soon as that condition was established, the exudation became detached without any local interference whatever; none during the whole course of treatment. Another important *fact* in this connection is, that the most severe and malignant cases I had were those in which it was most difficult to establish the condition of cinchonism. A little boy six years of age, son of C. L. Thomas, Esq., residing at No. 134 Jackson Street, Fort Wayne, Indiana, took sixty-four grains in forty-eight hours before he complained of "ringing in his ears or deafness;" but when this took place the membranes became detached of their own accord, his appetite in a measure returned, the swelling of the submaxillary glands began to subside, and in a comparatively short time he made a good recovery. In this case I did not make a single local application. In fact, I have abandoned local treatment altogether except in cases where it is absolutely necessary to remove excessive mechanical obstruction of the air-passages, or where it is necessary to correct the fetor by disinfectants. I had six other cases under treatment about the same time, all of whom were

well-marked, and the line of treatment pursued in each was as follows:

℞ Quin. sulph., gr. xxxii;
Acid. tannic., gr. x;
Syr. simp., f ℥ i;
Tr. ol. menth. pip., gtt. iii.—M.

Ft. mist.

Sig.—A teaspoonful every three hours until cinchonism is induced.

After which I administered the following:

℞ Potassii iodidi, gr. xxxii;
Potassii bromidi, ℥ ii;
Syr. simp.,
Tr. cinch. co., āā f ℥ i.—M.

Ft. sol.

Sig.—A teaspoonful every three or four hours.

The above may be given alternately with the following:

℞ Tr. ferri chlor., f ℥ ii;
Syr. simp., f ℥ vi.—M.

Ft. mist.

Alum or ipecac as emetics are useful when the exudation shows a disposition to extend to the larynx, or when there is much difficulty of breathing from tumefaction of the fauces, or from accumulation of the pseudo-membranous deposits. Food,—milk, beef-tea, and stimulants,—brandy, wine, etc., constitute a very important part of the treatment.

If the principles involved in the foregoing considerations of the treatment of diphtheria be correct, may we not reasonably conclude that the same or similar treatment will prove of great value in cases of puerperal fever and erysipelas?—*Philadelphia Medical Times*.

THERAPEUTIC NOTES.

TREATMENT OF DIPHTHERIA AND SCARLET FEVER.—Dr. G. Mayer (*Fahrh. f. Kinderk.*, vii. 4) is strongly in favor of the treatment of diphtheria by ice. Even in children under one year he directs small pieces of ice to be put frequently into the mouth, followed, if possible, every minute or two by a teaspoonful of iced water. The ice must be pure, and therefore all artificially prepared is best. In severe cases the external use of cold, by means of an ice-bag applied round the throat, is very useful. The author has found that by this mode of treatment the fever soon diminishes, and the diphtheritic membrane is detached and expectorated. It is only in exceptional cases that the disease extends nevertheless to the larynx. But in one case the author was obliged, in order to reduce the temperature, to resort to cool baths. The latter he also found very useful in scarlet fever. Whenever the temperature exceeds 102° in scarlet fever the patient is to be placed for ten minutes in a bath of a temperature varying from 93° to 73°, according to the intensity of the fever. The effect of these baths in reducing the temperature lasts for two or three hours.

READY FOR AN EMERGENCY.—According to the editor of the *Union Médicale*, a female practitioner in Paris was recently so overcome by the gush of

blood in a case of post-partum hæmorrhage that she fainted. By the time she recovered the patient was dead.

A VÉRACIOUS CHRONICLE.

The following rich gynæcological contribution is reported in the columns of the *American Medical Weekly* for Nov. 7th, 1874, by L. G. Capers, M.D., Vicksburg, Miss. Readers will not fail to observe the modest tone in which the author commences his description of the case. It will prove so interesting that we cannot forbear giving the whole *in extenso*.

“ATTENTION GYNÆCOLOGISTS!—NOTES FROM THE DIARY OF A FIELD AND HOSPITAL SURGEON, C. S. A.

“How common it is now-a-days, and how natural, too, for men to tell wonderful stories about ‘the war;’ their desperate charges; hair-breadth escapes; numbers who have fallen victims to their feats of personal valor, etc., etc. Then every surgeon has performed any number of wonderful operations before unheard of in the annals of surgery!

“Until the present moment, I have refrained from bringing before the public, and more particularly the Profession, any of my daring exploits or remarkable surgical procedures; and even now I feel a delicacy in offering the following remarkable case, the relation of which is prompted only by a sense of duty to my professional brethren. Doubtless many will pronounce the facts to be presently related as unusual or impossible; to such I need only, say, if not, why not?

“Here are the proofs:

“On the 12th of May, 1863, the battle of R. was fought. Gen. G.’s brigade met the advance of Grant’s army, under Gen. L., about one mile from the village of R. About three hundred yards in rear of my regiment was situated a fine residence, the occupants being a matron, her two daughters, and servants (the host being absent in another army.) About 3 o’clock p.m., when the battle was raging most furiously, the above-mentioned lady and her two daughters (aged respectively fifteen and seventeen), filled with interest and enthusiasm, stood bravely in front of their homestead, ready and eager to minister to their wounded countrymen should they fall in the dreadful fray.

“Our men were fighting nobly, but pressed by superior numbers, had gradually fallen back to within one hundred and fifty yards of the house. My position being near my regiment, suddenly I beheld a noble, gallant young friend staggering and then fall to the earth. In the same moment a piercing scream from the house reached my ear! I was soon by the side of the young man, and, upon examination, found a compound fracture, with extensive comminution of the left tibia; the ball having ricocheted from these parts, and, in its onward flight, passed through the scrotum, carrying away the left

testicle. Scarcely had I finished dressing the wound^s of this poor fellow, when the esteemable matron came running to me in the greatest distress, begging me to go to one of her daughters, who, she informed me had been badly wounded a few minutes before. Hastening to the house, I found that the eldest of the young ladies had indeed received a most serious wound. A minnie ball had penetrated the left abdominal parietes, about midway between the umbilicus and anterior spinal process of the illium, and was lost in the abdominal cavity, leaving a ragged wound behind. Believing there was little or no hope of her recovery I had only time to prescribe an anodyne, when our army fell back, leaving both field and village in the hands of the enemy.

"Having remained with my wounded at the village of R., I had the opportunity of visiting the young lady the next day, and, interruptedly, for a period of nearly two months, at the end of which time she had entirely recovered, with no untoward symptoms during treatment; save a severe peritonitis, she seemed as well as ever!

"About six months after her recovery, the movements of our army brought me again to the village of R., and I was again sent for to see the young lady. She appeared in excellent health and spirits, but her abdomen had become enormously enlarged, so much so as to resemble pregnancy at the seventh or eighth month. Indeed, had I not known the family and the facts of the abdominal wound, I should have so pronounced the case. Under the above circumstances, I failed to give a positive diagnosis, determining to keep the case under surveillance. This I did.

"Just two hundred and seventy-eight days from the date of the receipt of the wound by the minnie ball, I delivered this same young lady of a fine boy, weighing eight pounds. I was not very much surprised; but imagine the surprise and mortification of the young lady herself, her entire family. This can be better imagined than described. Although I found the hymen intact in my examination before delivery, I gave no credence to the earnest and oft-repeated assertions of the young lady of her innocence and virgin purity.

"About three weeks from the date of this remarkable birth, I was called to see the child, the grandmother insisting there was 'something wrong about the genitals.' Examination revealed an enlarged, swollen, sensitive scrotum, containing on the right side a hard, roughened substance, evidently foreign. I decided upon operating for its removal at once, and in so doing, extracted from the scrotum a minnie ball, smashed and battered as if it had met in its flight some hard, unyielding substance.

"To attempt to picture my astonishment would be impossible! What may already seem very plain to my readers, as they glance over this paper, was, to me, at the time, mysterious. It was only after several days and nights of sleepless reflection that a solution flashed before me, and ever since has appeared as clear as the noon-day sun!

"What is it? The ball I took from the scrotum of the babe was the identical one which, on the 12th

of May, shattered the tibia of my young friend, and in its mutilated condition, plunged through his testicle, carrying with it particles of semen and spermatozoa into the abdomen of the young lady, then through her left ovary, and into the uterus, in this manner impregnating her! There can be no other solution of this phenomenon! These convictions I expressed to the family, and, at their solicitations, visited my young soldier friend, laying the case fully before him in its proper light. At first, most naturally, he appeared sceptical, but concluded to visit the young mother. Whether convinced or not, he soon married her, ere the little boy had attained his fourth month.

"As a matter of additional interest, I may mention having received a letter during the past year, reporting a happy marriage state and three children, but neither resembling, to the same marked degree, as the first—our hero—Paterfamilias!"—*Lancet*.

FORMULA FOR VOMITING IN GASTRIC CATARRH

Mr. T. Lauder Brunton gives the following formula which he has found very useful in gastric catarrh and subacute gastritis:—

R —Bismuthi subnit. gr. x.
Potass. bromid. gr. xv.—xx.
Acid. hydrocyan. dil. m v.
Spt. chloroform. m x.
Mucilag. tragacanth fl. ꝑ ij.
Aqua ad fl. ꝑ j.

Sig.—To be taken every three or four hours.

The medicine should be given about ten minutes before food, so as to diminish the irritability of the stomach and prevent the rejection of the nourishment, and it is often advisable to make the patient lie down on the left side during or immediately after the meal. A tendency to vomit is often increased by lying on the right side.—*Practitioner*, Dec., 1874.

TREATMENT OF GONORRHOEA.

The following is an extract from a lengthy article by Dr. Haberkorn, in the *Berl. Klin. Wochenschrift* No. 34, on the above subject:

Injections of permanganate of potassa, carbolic acid, sulphate of zinc, and other remedies, have all proved more or less insufficient in the treatment of gonorrhœa. After repeated experiments the author has found the sulphate of quinine to be a far superior remedy, being prompt in its action and nearly painless. He directs about a teaspoonful of the following mixture to be injected three times a day, retaining it for some time in the urethra:

R Quinæ sulphat., gr. xv.
Acid. sulphur., dil. ꝑ j.
Glycerinæ, f ʒ vj.
Aque, f ʒ ij.

After three days a great improvement took place in all his cases. The expense of the medicine is covered by the rapidity of the cure. These results therefore justify a more extensive trial of this remedy.

THE WET SHEET IN SCARLATINA.

BY JOHN TAYLOR, M.R.C.S., L.S.A.

As the present high rate of mortality from epidemic scarlatina may justify practical suggestions prompted by experience, I feel it my duty to endeavour to excite the profession to a reconsideration of the remedial powers of the wet sheet as an auxiliary in promoting cutaneous elimination.

Though all agree as to the importance of promoting and sustaining cutaneous elimination in the prevention of cerebral, spinal, and other congestions, and, at a later stage, the disintegration of mucous membranes, dropsy, and glandular enlargements, yet this simple, powerful, and ready-at-hand auxiliary is unappreciated. Forty years' experience has assured me that this plain or medicated vapour-giving envelope affords the best *external* means for eliminating scarlatinal poison and preventing destructive sequelæ. It promptly suppresses pyrexial heat and itching; produces sleep, with a soft secretive skin, more or less continuously; and enables the digestive organs to accomplish that great desideratum in the treatment of scarlatina—viz., absorption of highly nutritious food. It may be repeated, on the recurrence of the febrile paroxysm, two, three, or four times in twenty-four hours, the patient remaining enveloped from half an hour to an hour. Mothers and nurses who have witnessed its efficacy are most earnest in its repetition. My plan of procedure is to immerse a nightgown, slit up at the front, in hot water (half a pint to a pint), pure, or medicated with a drachm or two drachms of tincture of capsicum, or in the infusion of three or four pods; or in mustard-water, the clear supernatant fluid from a tablespoonful of mustard to a pint of water; extending the gown over the feet by means of a towel immersed in the same fluid, both to be well wrung out and suddenly applied, and the patient quickly packed in two blankets previously placed on the adjoining sofa or bed; another blanket, or two pillows, or an eiderdown quilt covering all.

The medicated packing is preferable in the incipency, and at any other time to evoke the rash, and in cases of cerebral oppression, with pale skin, low pulse, and delirium. Last month I had a case of this type, in which the mustard packing was applied. It did not elicit the rash, but it cured the delirium raised an alarmingly depressed pulse, and restored the excretions. This effect was solely dependent on the medicated packing, as the patient, a girl of thirteen, could not swallow medicine or food, and enemata had not then been administered. With the aid of a tonic she made the best recovery of three in the same family, and had no sequelæ.

The auxiliary mode of treatment here defined is by no means intended to exclude the ordinary plan which every practitioner's experience has led him to select and rely upon; but I am of opinion that if packing is judiciously incorporated with such reliable treatment, it will be the means of saving many lives that would otherwise be lost, and of diminishing the severity and duration of the sequelæ.

I further believe that in other cases of blood-poisoning

the exhibition of medicaments cutaneously by vapour would in some degree neutralize the poison, aid its elimination, and, as in packing, soothe the whole nervous system. During a cholera epidemic in Liverpool I had part charge of a district where nearly all who first went into the hospital died. One woman, with cholera in the malignant form, was packed in a wet sheet with half a pound of mustard, and remained enclosed six hours, notwithstanding her imploring entreaties to be released. She drank copiously of iced water. The vomiting, purging, and cramps began to abate in two hours, and had ceased when she was unwrapped, presenting the ordinary lobster change from blue to red. Gastric fever, with great thirst, ensued for several days, when she recovered as a brand plucked from the burning.

Modern parliamentary mustard, deprived of capsicum and other adjuvantia which made it formerly a condiment so famous, would not have answered the purpose. Doubtless, *persevering cutaneous elimination* is a great medical power.

Not only as an eliminator may the wet medicated envelope be used, but as an antispasmodic in the relief of pain and irritation in any of the meninges, mucous, submucous, or serous; with the aid of chloral, morphia, conium, belladonna, nux vomica, &c., dissolved in the water, or sprinkled on any particular part of the wet sheet. It has the merit of antiquity from the ancient Romans, and among the farmers of Great Britain for the relief of colic and the inflammatory diseases of cattle. A sheet, wet with some herb decoction, or water sprinkled with turpentine, was thrown over the suffering animal, and enveloped by blankets, quilts, and overcoats, snatched from the beds on which "the rude forefathers of the hamlet slept." And, doubtless, many a pang was thus allayed and many a life preserved. Modern experience has witnessed the amazing relief procurable from the wet sheet, in its simple form, in pyrexial and glandular disorders, and from the medicated form in the zymotic and spasmodic affections. In stridulous croup, for instance, I have seen the mustard sheet act magically after other means more orthodox had failed. Its power is also potential in diphtheria simulating croup, and, in strong doses, in inflammatory croup, sometimes averting the impending tracheotomy knife.

The suggestion to use this auxiliary plan of treatment should not be slighted because of its antiquity or of its having been used empirically. Many blessings, moral and physical, have fallen into disuetude, and require revivals to awaken a consciousness of their existence and utility; and this is one of them, lying neglected within our reach. Objection would be rational if the more primitive plan of enveloping the suffering man or beast within the skin of a newly killed animal were recommended; but when one so simple and close at hand, so easily adapted, so soothing, and so powerful as an auxiliary in the routine of medical treatment, is recommended, suffering humanity should have the benefit of it, especially where no self-interest prompts the recommendation—except the satisfaction of doing good by presenting the cup of cold water so typical of charity.—*Lancet*.

ANOINTING WITH COCOA-BUTTER IN SCARLET FEVER.

Upon the recommendation of Schneeman, the anointing of the body with fat has been extensively practised in Germany, during more than twenty years, with the view of lowering the temperature, and hastening the desquamation. Dr. Bayles suggests, in this connection, the employment of cocoa-butter as producing a more cooling and refreshing effect upon the patient, and emitting a more agreeable odour in the sick chamber. This agent, on account of its solid consistence, is more readily applied than either fat or oil, and is more easily absorbed by the skin. Furthermore, it is thought to afford the system a certain amount of nourishment. In severe fevers, the entire surface of the body should be rubbed with this substance every hour, or at least once every four hours. Its application is also recommended in typhoid fever in cases where the patients manifest a dread of water or where the application of water is impossible; likewise in other inflammatory diseases, especially the severer forms of inflammatory rheumatism, and in tuberculosis.—*London Med. Record*, Nov. 25 1875.

A NEW SIGN OF PLEURITIC EFFUSION.

According to Dr. Ward of New York (*New York Med. Journal*), it is easy to determine fluctuation of liquid in pleuritic effusions as well as in ascites and in ovarian cysts. When the chest is full of water, by having an assistant to use percussion in the second or third intercostal space, and by placing one's finger in the seventh intercostal space, where thoracentesis is practiced, the feeling of fluctuation, according to Dr. Ward, is distinctly given.

A correspondent of the *Dublin Medical Press* gets off the following very good satire on the names of the Dublin medical men. He says:

On looking over the names of our Dublin medical men, it has occurred to me that much convenience would result from each devoting himself to that branch of his profession indicated by his name. Thus I would place the lunatic asylums under the charge of Dr. Madden, the more violent cases being attended to by Dr. More Madden. I think that Drs. Boyes and Birch might fairly be deputed to look after the weaknesses of young persons; while Dr. Luther would be at home in charge of the Adelaide Hospital. The Lying-in Hospitals fall naturally to Drs. Bredin and Kidd; while hysteric affections should be treated by Drs. Cryan, Smyly, and Laffan. Diseases of the bladder might be left to Dr. Stoney; while for baldness I do not know any more suitable advisers than Drs. Hare and Head. All matters relating to fees should be referred to Dr. Price; while attendance should be regulated by Dr. Daly. For lameness I would consult Drs. Walker and Foot; for shot wounds, Dr. Gunn; but for operative surgery, undoubtedly Surgeons Steele, Butcher, and Gore would be selected. For skin diseases, I would call in Dr. Peele; while questions of food might be left to Drs. Fry, Boyle, Cooke, Rice, and Porter.

ITCH.

In this disease, Dr. F. W. Clemens reports, in the *Allgemeine Medicinische Centralzeitung*, excellent results, with the following ointment:—

R.	Arsenious acid,	grs. ij
	Carbonate of potash,	grs. x
	Spirit of soap,	3 j
	Water, to	3 j. M.

Sig. Rub twice daily on the infected parts. He has never seen any ill effects from this preparation and its action had proved very prompt, curing "in a few days."

CHLORATE OF POTASH IN OZÆNA.

Dr. Eyslein, of Blänkenberg, reports a very obstinate case of ozæna, which he had cured by painting the ulcerous nasal membrane with a solution of chlorate of potash, one part to six of water (by weight)

THE THERAPEUTIC VALUE OF IODIDE OF POTASSIUM.

THE CANADA MEDICAL RECORD

A Monthly Journal of Medicine and Surgery.

EDITOR:

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MONTREAL, APRIL, 1875.

WESTERN HOSPITAL OF MONTREAL.

The second annual meeting of the Corporation was held on the 14th April, when the following officers were elected: President, Major Mills; 1st vice-president, William Workman; 2nd vice-president, Hugh McLennan; treasurer, James Jack; secretary, James Coristine. It was announced that the gentleman from whom the Western Hospital had bought their ground was willing to accept sums of five thousand dollars, when convenient for the Society to pay it. It was unanimously decided to accept this offer, and a second sum of five thousand dollars has since been paid. As the amount of money for the land purchase has been subscribed, it is anticipated that the ground will be entirely free of debt sufficiently early in the autumn to allow the foundation for Major Mills' building to be laid before the snow sets in.

MONTREAL GENERAL HOSPITAL.

At the last quarterly meeting of the Governors of this charity, a notice of resolution, given by Mr. T. M. Taylor, was brought up for discussion. The object of this motion was to take the appointments of the House Surgeon, Assistant House Surgeon and

Apothecary out of the hands of the Medical Board and Committee of Management and place it in the gift of the Board of Governors. The resolution was, we learn, carried unanimously.

A HOST OF CHANGES.

There has been quite an earthquake among the two English Medical Schools in Montreal, and the resulting changes can be ascertained on a reference to our personal column. For a time the Medical atmosphere was not the clearest, but the genial air of spring has calmed it materially, and once more all is quiet and serene. May it so continue!

MEDICAL FACULTY BISHOP'S COLLEGE.

The session at this school terminated on the 19th March. The following gentlemen passed their examination on *Botany*: Mr. Casey A. Wood, Ottawa, Ont.; Mr. William Young, Montreal; Mr. J. B. Tressider, Montreal; Mr. C. R. Belle, Montreal. *Primary Examination*, for the degree of M.D.:—Dr. Frederick Benoit, Longueuil; Mr. John T. Davis, Barbadoes, West Indies, and Mr. Anthony Kerry, Montreal.

Final Examination, for the degree of M.D.:—Dr. Frederick Benoit, Longueuil; Mr. John T. Davis, Barbadoes, West Indies, and Mr. Joseph Arthur Pidgeon, of Quebec. Mr. Davis is the prizeman in the Primary and the Final branches, and Mr. William Young of Montreal has secured the prize for the best dissector. The degrees in medicine will be conferred at the annual convocation of the University on the 24th of June.

TEST-QUESTIONS.

Some "Anti-Vaccination" delegates recently waited upon a candidate for the British House of Commons, and asked him, whether, if they voted for him, he would support the repeal of the Compulsory Vaccination Act. His answer was, "If you will only vote for me to-morrow, you may all get the small-pox the next day if you like". The answer was not considered perfectly satisfactory.

THE CAUSATION OF SCARLET FEVER.

Dr. J. G. McKendrick of Edinburgh is at present engaged in a research on the causation of scarlet fever, of which there is an epidemic at present in Edinburgh. Microscopic examination with high powers reveals, we understand, the presence in the mucus, from the tonsils and in the skin, of minute bodies similar to those discovered by Klein in typhoid fever, and by Klebs in diphtheria.

THE LARGEST VOLUME IN MEDICAL LITERATURE

DR. TRIPLETT, of Washington, says, in an article in the *Richmond and Louisville Medical Journal*—"I must not omit mentioning a discovery made on the premises of Dr. J. M. Toner, late President of the American Medical Association. The basement of his house represents the vast index of a monster volume of 'Medical Literature.' Lettered drawers are filled in alphabetical order, with strips of paper, on which are marked the headings of all original contributions of the medical journals of this country, and properly numbered for quick reference. The upper rooms represent the body of the book. I had no idea there was such a huge volume, or so great a worker in town."

OBITUARY.

We regret to have to chronicle the demise of Dr. William H. Wagner of Dickinson's Landing, Ont., which took place on the 7th of April. Dr. Wagner was a graduate of Jefferson Medical College of Philadelphia; also of McGill College, Montreal. He was a man of much ability, and was much respected by his patients and friends.

PERSONAL.

Dr. R. N. Webber (M.D. Bishop's College) of Richmond, Que., has received the appointment of Professor of Natural Science in the St. Francis Agricultural College, which has just been organized by the Board of Agriculture. A farm at Richmond has been secured, and it is intended to make it the model farm of the Province of Quebec.

Dr. H. M. Jones has removed from Marmora to Cambermere, Ont.

Dr. Craik, Professor of Chemistry, University of McGill College, has taken a trip southward, with a view to recruiting his health, somewhat impaired by a very hard winter's work.

Dr. Lewis G. Hunt (M.D. McGill College, 1871) has removed from Deepcon, near Sheffield, England into the town of Sheffield, and entered into partnership with Mr. Barber, the Senior Surgeon of the Sheffield Royal Infirmary.

Dr. Arthur Brown, (M.D. McGill College, 1872,) late associated in practice with Dr. Fenwick, commences practice entirely on his own account after the first of May. Dr. Brown has rented the well-known Medical corner in Montreal, corner of Craig and Place d'Armes Hill, where we wish him every success.

Dr. Cline, (M.D. McGill College, 1874.) Apothe-

cary, Montreal General Hospital, read before the Medico-Chirurgical Society of Montreal, on the evening of the 16th April, a most interesting case of Progressive Muscular Atrophy in a boy near fourteen years. It began somewhat suddenly when the boy was between eleven and twelve years old. The atrophy was confined to the lower extremities, and progressive movements are made entirely by the hands. The patient was exhibited. The paper was the most interesting which the Society has had before it for some time, and we consider it a disgrace to the profession of Montreal, that so few members were present to hear it read.

Dr. R. T. Godfrey, Professor of Hygiene, McGill College, accompanied by his family sail in the *Peruvian* for Liverpool on the 1st of May.

Dr. George W. Campbell, Dean of the Medical Faculty of McGill College, and Professor of the Theory and Practice of Surgery, has resigned his chair. He still remains in the Faculty as Dean, and Emeritus Professor of Surgery. Dr. Campbell has been connected with McGill College, as Lecturer and then Professor of Surgery since 1836. He was elected Dean, upon the death of Dr. Holmes, in 1860.

Dr. George E. Fenwick, Editor of the *Canada Medical and Surgical Journal*, and late Professor of Clinical Surgery and Medical Jurisprudence in McGill College, succeeds Dr. G. W. Campbell, as Professor of "the Theory and Practice of Surgery."

Dr. Robert T. Godfrey, late Professor of the Theory and Practice of Surgery in the Medical Faculty of Bishop's College, has resigned his connection with that school, and has been offered the chair of Hygiene in McGill College, a Professorship of that branch being about to be established by the governors of the College.

Dr. Thomas G. Roddick, late Lecturer on Hygiene, and Demonstrator of Anatomy in McGill College, has been appointed Professor of Clinical Surgery in the same school, the chair being vacant by the transference of Dr. Fenwick to that of Systematic Surgery.

Dr. William Gardner has resigned his Professorship of Medical Jurisprudence in Bishop's College, and has accepted the same chair in McGill College.

Dr. Richard A. Kennedy, late Professor of Anatomy in Bishop's College, has been elected to fill the chair of Surgery in the same school, rendered vacant by Dr. Godfrey's resignation.

Dr. James Perrigo (late Demonstrator of Anatomy in Bishop's College) has been elected Professor of Medical Jurisprudence, the chair vacated by Dr. Gardner.

Dr. William Fuller (late Demonstrator of Anatomy in McGill College) has been elected Professor of Anatomy in Bishop's College Medical Faculty, that chair being rendered vacant by Dr. Kennedy's transference to Surgery.

Dr. André Latour (M.D. Bishop's College, 1872) has been appointed Demonstrator of Anatomy in the Medical Faculty of Bishop's College.

Dr. Wolford Nelson (M.D. Bishop's College and M.D. McGill College, 1872) has been appointed Assistant Demonstrator of Anatomy in Bishop's College. He is to continue to fill his late position as Curator to the Museum.

Dr. Sheppard (M.D. McGill College, 1874) has been appointed Demonstrator of Anatomy in McGill College.

Dr. Godfroi Dubuc (M. D. Bishop's College, 1872) is about leaving Bedford, Q., to settle in Montreal.

His Worship the Mayor of Montreal, Dr. Hingston, entertained at Dinner on Tuesday, the 13th inst., the members of the Medical Faculties of McGill College, Bishop's College, and Victoria College. A very pleasant time was passed and for the nonce, the rivalry of Schools was smothered around His Worship's festive table. The professors in one school toasted the professors of the other schools most cordially. We have rarely seen a more genial party.

MEDICAL SCRAPS.

A New York medical man has christened his daughter Glycerine. He says he will prefix Nitro to it if he finds her temper to resemble her mother's.—There are six hundred and fifty doctors in Chicago.—The New York Academy of Medicine has purchased a building for its use, at a cost of \$42,500.—Sir Henry Thompson, owing to the pressure of private practice, has resigned his post as Surgeon to the University College Hospital, London, also his Professorship of Clinical Surgery.—Three brothers named Delafield died almost simultaneously in New York about the middle of February from pneumonia. They were aged respectively eighty-five, eighty-three and eighty-one years. They were all buried at the same time.—The Countess of Schlippenbach, in Croatia, was recently delivered of four infants at a birth,—three girls and a boy.—A woman named Latouche in Quebec on the 10th of last November had four boys at one birth.—Dr. Williams of Bridgeport, Kentucky, reports in the *American Medical Weekly* that he recently confined a negro girl, aged 11 years and 3 months, of a male child well formed and weighing 8 pounds. Mother and child did well.—Take of elastic colloid one ounce, hydro

chlorate of morphia fifteen grains. Dissolve the morphia in the collodion. Spread with a camel's hair pencil some of this solution over the painful part and cover with oil silk. The effect is said to be most satisfactory.

REVIEWS.

Cyclopædia of the Practice of Medicine. Edited by DR. VON. ZIEMSEN, Professor of Clinical Medicine in Munich, Bavaria. Volumes I and II, Acute Infectious Diseases. New York, William Wood & Co.

These two volumes, kindly sent us by the American publishers, have been in our possession for some time, and would have been noticed at an earlier date had we not desired to have an opportunity of examining them thoroughly before pronouncing an opinion. This we have been enabled to do. The work we may premise is issued by Messrs. Wood & Co., of New York, the translation of the various articles from the German, being made by Medical men residing in various portions of the United States, and although none of their names are familiar to us, we feel thoroughly satisfied that the work has been well done. All the articles read smoothly, a matter sometimes difficult of accomplishment when transcribing into a language so precise and dogmatical, as is our English tongue. Volume I. consists of some seven hundred pages, and contains papers on the following diseases:—Typhoid Fever—Relapsing Fever—Typhus Fever—Cholera—the Plague—Yellow Fever—Dysentery—Epidemic Diphtheria. The first paper on typhoid fever is from the pen of Liebermeister, a physician of considerable German experience, who was at one time assistant to Niemeyer. Its length is considerable, occupying fully two hundred pages. As to the question of the contagiousness of the disease, he says, "from long experience I do not hesitate to assert that the opinion that typhoid fever can be purely contagious, and can be transmitted directly from person to person, is not founded on actual observation. Such an opinion is only a relic of the pastime." He, however, classes it as a miasmatic contagious disease, and believes most thoroughly that every epidemic and every isolated case of typhoid fever is due *alone* to the specific poison of typhoid fever. He says, "If the specific poison is absent, every other evil influence may act on the population without

producing typhoid fever. No matter how well a field may be manured, wheat will not grow unless wheat be sown. Besides the presence of the poison, many other conditions are necessary to produce typhoid fever * * * they must find a favourable soil for their reception and growth * * * a *local disposition* for the production of the disease, and an *individual disposition* for its development." At page 161, in speaking of the complications which are met with in the disease, we notice that the trifacial nerve is mentioned as being liable to injury on incision being made to evacuate pus when the parotid gland is involved. This is evidently an error, the facial or portia dura being the only nerve likely to be so injured, as it passes through the gland, and as this is the motor nerve, paralysis would of course follow its section. When entering upon the treatment of a case Dr. Liebermeister advises much attention being shown to disinfect the dejections. The plan he follows is to use a porcelain bed-pan, and to have the bottom of it strewed with finely powdered sulphate of iron before it is used; immediately after the dejections have been passed, to pour upon them crude muriatic acid. The only remedy which we notice he refers to, and which is not generally mentioned in text books or generally used in this city, is iodine. This he used in about two hundred cases, and although it did not exert any specific effect in changing the course of disease, yet the mortality in his opinion was lessened. He also speaks favourably of calomel, at first in ten grain doses and then in $7\frac{1}{2}$ grain doses—given early in the disease, and repeated at least three times in the twenty-four hours. The diarrhœa, at first increased, seemed to be afterwards lessened by this drug, and there was lowering of the temperature. Upon the subject of dietetic treatment but little is said; but water as much as would be taken in health is allowed, while milk is also strongly advised, not in its pure state, but diluted with water. We confess the subject of treatment is not as full as we should have wished.

We have not space to notice the other articles, but pass on to notice very briefly the article on diphtheria by Oertel. He claims the disease to be one of the oldest epidemic diseases of the human race, being known even to Homer and Hippocrates under the name of the Malum Egyptiacum. At the close of the first

century after Christ, Aretæus mentions it, and states that the tonsils are covered with "quodam concreto humore albo," which spread over the gums. He alludes to the discovery made by Hueter and himself simultaneously, that the diphtheritic membrane and even the blood contained in great numbers vegetable organisms or bacteria, to which he gives the name micrococci, and these he believes are the essential elements of diphtheritic contagion. He believes that the disease commences as a local disease and afterwards develops into a general one, until by blood poisoning it renders the organism incapable of life. We will not attempt to even give a synopsis of the treatment (save to allude to the heroic doses of quinine, ten to fifteen grains, three to four times a day, which he uses) for it cannot in any way be abbreviated, so thoroughly has the author joined it. This paper and the first one on typhoid fever are really the best in the book. They will, moreover, be the more eagerly perused, for they describe diseases which are commonly met with.

Volume II., which has more recently reached us, is also upon acute infectious diseases, and contains papers on the following subjects:—Varicella—Measles—Rubeola—Scarlet Fever—Small-pox—Erysipelas—Miliary Fever—Dengue—Influenza—Hay Fever—Malarial Fevers—Epidemic Cerebro-Spinal Meningitis. As can be imagined from the above table of contents Volume II. is, taking it all in all, much more valuable to the practicing physician than is Volume I., as it contains papers on a class of diseases which are of very common occurrence. The most of the articles are well written, although one or two seem to us not to be quite up to the mark. The essay on scarlet fever is a really good exposition of the disease, and contains much of practical value in its treatment. The removal from the patients room of all useless articles of furniture, such as book cases, cupboards, curtains, carpets, &c., is strongly advocated, as is also an abundant and constant supply of fresh air. To prevent the dissemination of the dusty particles of the infecting epidermic scales, particularly during the period of desquamation, it is recommended that the body (including the head) should be rubbed twice daily with olive oil. Particular attention is directed to the fact that under no circumstances should the convalescent from scarlet fever be allowed to mix with the rest of the family till the desqua-

mation is complete. We feel the importance of this, and yet we know how very difficult, if not utterly impossible, it is in the great majority of cases to have this rule carried out. On the question of hydro-therapeutics, in this disease, the author of this paper speaks strongly, and says that the old prejudice against baths, based on the fear that the patient may thereby take cold, must be laid aside. He feels convinced that since he has ordered a daily bath the nephritis has been less frequent and less severe. During the period of great fever, water which has been gradually cooled down is recommended, while, as the fever diminishes, the temperature should be gradually increased, and during the period of convalescence it should be warm. In mild scarlet-fever, when the patient is most likely to be very sensitive to cold, he suggests that only warm baths should be employed. As a dietetic article we notice that frozen beef tea is recommended, and we can very readily imagine that this method of giving nourishment in a frozen state would be exceedingly agreeable to the patient. Space forbids our saying more. We think that while many of the ideas of German authors should be received with considerable caution, yet a great mass of very valuable information may be gathered from the two volumes which have been already issued, and if subsequent numbers even show an equal character, we predict for this Cyclopædia a very great financial success to its publishers. It is to consist of fifteen volumes, and they are to be issued at intervals of three months. The work can only be had by subscription, and is not, we understand, for sale at any book store in the Dominion or United States. The cost of the volumes as received by us (and it is the cheapest style issued) is five dollars, but with finer binding it costs a somewhat higher rate. We very cordially, indeed strongly, recommend it to our readers. As an evidence of the value placed upon it by our Montreal physicians, we may state that there are about sixty of them who have subscribed for it. It is a splendid work for reference, and will, we are confident, amply repay the outlay.

BIRTH.

In Montreal on the 21st April the wife of R. Palmer Howard, M.D., of a daughter.

DIED.

At Dickinson's Landing, Ont., on the 7th April, William H. Wagner, M.D., aged 61 years.