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Original Communications.

Treatment and Prevention of Post Partum Hæmorrhage. By A. A. HENDERSON, M.D., of Ottawa. Read before the Bathurst Medical Association.

GENTLEMEN,—America is eminently practical. In medicine, as in science, the chief object is to make all things practically serviceable. More attention is given to the preparation of elegant and convenient elixirs and fluid extracts, and to make pills more palatable by coating them with sugar or gelatine, than to elaborate theories. Accepting this precedent, I will today read a short paper upon one of our most practical subjects. *Uterine hæmorrhage* is a subject of importance. In the practice of our profession we may at any moment be called upon to stand face to face with death in this, its most appalling form; but, thanks to the advancement of knowledge in the age, we can now grapple with, and overcome the "KING OF TERRORS" in this, one of his strongholds. Every physician is familiar with the general rules for the treatment of uterine hæmorrhage, and all must have been impressed by the fact that the views held by many obstetrical authors conflict. My object in selecting this subject is to ascertain what method of management the gentlemen of this Association have found to be most successful. With this object in view, I shall consider as briefly as possible the general rules of treatment without entering into details, mentioning only those which are to my mind most practical as well as most rational.

Post Partum Hæmorrhage may occur before or after the separation of the placenta. Brevity is necessary, therefore I shall discuss only that form occurring immediately, or within a short time after the separation of the placenta.

This is caused either by—I. *Uterine Inertia.* II. By *Hæmorrhagic Diathesis.* III. By *Mismanagement,* such as moving or exciting the patient. IV. By *Laceration* of the *soft parts.* V. Or by *Retention* of a *small portion* of the *adherent Placenta,* or of a *coagulum.*

In such a case, when caused by *uterine inertia,* the contractile power of the uterus must be restored in the most prompt manner possible. To do so, the general circulation requires to be supported, or local treatment will be of no avail. To regulate the heart's action in order to accomplish this, *stimulants,* of which brandy and ammonia are most popular, are imperatively indicated, and generally in large quantities. Should the stomach refuse to retain it, brandy and milk may be injected into the rectum, or ether be injected hypodermically. Admit fresh air freely into the apartment. Stimulants are indispensable, because the contraction of the uterine fibres must be produced and maintained, in order to thoroughly control hæmorrhage from that organ; and, as extreme loss of blood impairs the contractile power of the uterus, through consequent exhaustion of the nerve force by reason of a too scanty supply of blood to the uterine nerve centres. Therefore the heart's action *must* be stimulated in order to make the remaining small quantity of blood fulfil the purpose of the larger quantity which is normally present.

In addition to stimulants, two other remedies are *of* inestimable value in such cases. They are *opium* and *ergot.* Although they are both used as remedial agents in flooding, yet they differ widely in their effect, consequently either will be of service only under suitable circumstances. *Ergot,* to be beneficial, must be given before the uterus has lost its irritability. Hence its action is that of a *preventative,* as well as that of a *curative* agent. The *hypodermic injection of ergotine* may be favorably mentioned as a mode of obtaining the specific effect of the drug in cases where the use of ergot in the ordinary way is inadmissible. The strength of the solution for this purpose should be *one* to *two* grains in 10 M. of water. If ergotine cannot be obtained, the *fluid extract of ergot* may be used instead, in the same way. From 15 to 30 M. should be used at each time, but its action is not so satisfactory.

Opium, in a full dose, on the other hand, is beneficial when the hæmorrhage is excessive, and has caused uterine exhaustion. Here, acting as a stimulant, it saves the patient from the consequences of extreme loss of blood; but, under *no* circumstances, must it be given when the loss has been so slight as not to impair the uterine tone, or the result be disastrous.

The application of the infant to the breast may be mentioned as being sometimes beneficial.

It is with reference to *local treatment* that the greatest discrepancy of opinion prevails.

Friction over the uterine surface is not worthy of any reliance.

Firm pressure, with *manipulation* over the fundus uteri has a powerful influence, as it tends to secure a uniform contraction of that organ. It is useful as a means both of checking and of preventing flooding. Supra pubic pressure should be maintained *before* the separation of the placenta, to prevent irregular contraction, and consequent retention of the placenta. It should be also maintained *after* the separation of the placenta, to prevent the uterus relaxing and becoming filled with blood.

The *introduction of the hand into the uterine cavity*, accompanied by counterpressure outwardly is beneficial in an especial degree when the uterus contracts irregularly; also when used promptly in inertia, but *never* in inertia when flooding has been so great as to cause *extreme exhaustion*, for the shock which it then occasions might prove fatal.

Cold water or ice, as a local application, should be used with discretion, as it is a powerful means for good or ill. It may be applied, according to the necessity of the case, to the vulva, sacrum, or abdomen; or cold water may be injected into the vagina, or even into the uterine cavity itself, if circumstances may demand it. It should only be resorted to in cases where manipulation has been tried and found insufficient, for the habit of resorting to ice or cold water when the first gush of blood is seen is a practice that is as *pernicious* as it is *uncalled* for.

When a *hæmorrhagic diathesis* exists, flooding should be anticipated, when such is possible, by appropriate treatment previous to, as well as during, confinement. What that treatment is, must depend upon whether *plethora* or *anæmia* be the cause.

With reference to the *fourth* and *fifth* enumerated causes: if, in any case, after the removal of the placenta, flooding should continue, although the uterus be properly contracted, a vaginal examination should be made, with a view of ascertaining the cause. If *laceration* of the *os* be detected to be the cause, immediate benefit will be obtained by saturating a tampon with a strong solution of tr. ferri mur., and applying it to the os. The application of iron in this case is quite free from the grave objections which can justly be urged against its use as an injection into the uterine cavity. Hæmorrhage from *laceration* of the *vagina* or *perineum* must be treated according to the extent of the injury, either by astringent applications or operative interference. If no laceration of the soft parts be found sufficiently extensive to account for the symptoms present, then the examination should be continued into the *uterine cavity*, as possibly a portion of retained placenta or a firm coagulum may be the cause. If it be so, the necessary treatment must immediately suggest itself, *i. e.*, removal of that which, in reality, has become a foreign substance.

One other important means of controlling hæmorrhage yet remains to be mentioned. A means highly lauded by several obstetrical authorities, and as strongly condemned by others, whose opinion merits an equal confidence. I refer to the *injection into the uterine cavity* of a solution of the *tinct.* of the *perchloride of iron*. By taking a course between these extremes, we arrive at the *practical truth*, which is what we require. It cannot be denied that its use is sometimes dangerous to life, and that death has resulted from it; while it is equally true, on the other hand, that under certain circumstances, the patient must die if it be not used. In employing it, the most approved strength of the solution is 1 to 2, or 1 to 3 of water; and of this about ℥viii should be injected, particular care being taken to pass the end of the tube up to the fundus uteri, and to inject slowly. It checks the hæmorrhage instantly, but it should never be used otherwise than as a *dernier resort*, after the failure of all other available means, such as have already been mentioned. The danger attending its use lies in the fact that sometimes the contraction of the uterus after its use is not perfect, and in such a case the partially open extremity of each vein and sinus is closed by a coagulum, which certainly perfectly checks the flow of blood. Absorption of the septic matter caused by the decomposition of those coagula is certain, in such a case to occur, and death, in all probability, be the result. Great care, then, ought to be taken to ensure complete and permanent contraction of the uterus, after injecting the styptic solution as a prevention of such a disastrous consequence —bearing in mind that the injection into the uterine cavity, of a solution of *iron*, of any strength, and with all possible care, *may* be fol-

lowed by such a dire result. I shall, nevertheless, when other feasible means fail, never, for one moment, hesitate to use it in any case of mine, as it gives a prospect of ultimate recovery, in the room of inevitable death.

Thus far, gentlemen, the management of hæmorrhage, when once it has taken place, has been considered. The aim of the accoucheur, however, should be not to wait until it *has* occurred and then control it, but to adopt means which shall prevent it from setting in at all. It is quite possible that cases *may*, nay certainly they *will*, occasionally be met with, in which all possible care cannot prevent the occurrence of this grave complication of labour; but I do unhesitatingly affirm that, by adopting proper preventative treatment, the occurrence of post partum hæmorrhage would be almost unknown. I have omitted to mention many of the methods sometimes used for checking flooding when it has set in, for my chief object is to elicit discussion upon the possibility of an almost universal protection from it. Indeed the treatment of post partum hæmorrhage may be summed up in one sentence, viz., we must cause firm uterine contraction by some means, and, to do so, we must trust to our judgment to accomplish that with the means which may be at our disposal at the moment. As hæmorrhage, when it has occurred can only be checked by inducing firm uterine contraction, so the *prevention* of it can only be accomplished by obtaining the same firm uterine contraction, but obtaining it earlier in the case. I have tested preventative treatment thoroughly, and have not in a single instance had hæmorrhage which necessitated any interference whatever. The mode recommended may appear very simple, but it is as effectual as it is simple.

In any suspicious case of labour, ergot in a full dose as a preventative, is advisable; but not waiting for the head to press upon the perineum as is sometimes directed. It should be given at least half an hour before delivery is effected, in order to allow it time to act.

If there be marked anæmia, or threatened exhaustion, I do not by any means look upon the judicious administration of stimulants during labour, to be just so much poison. I certainly feel convinced that in more than one instance my patient's life was saved by them. Stimulants during labour, like opium or ergot, should only be used when indicated; as, like them, if administered when contra-indicated serious consequences might result. It cannot be denied that when there is much exhaustion during labour there is more danger of deficient uterine tone, and consequent flooding after it.

In every case I remove the child gradually, and follow it down by the nurse pressing above the fundus uteri. After the birth of the child, I direct the nurse to maintain proper pressure over the fundus to prevent the uterus from relaxing till the funis is secured and divided. When that has been attended to, I press gently, but firmly, over the uterus to insure proper contraction upon the placenta, which will be accomplished in a few moments. I then, carefully maintaining with my own hand a proper degree of pressure, have the patient gently assisted from the left lateral position which she has occupied during labour, to the dorsal position. This usually causes the placenta to be at once expelled into the vagina, without any traction upon the cord. If it should not do so, pressure upon the fundus of the uterus, and directing the patient to cough, will soon accomplish it. It is then only a question of a few moments to remove it from the vagina. This prompt expulsion of the placenta is a matter of importance when flooding threatens, or has taken place, because, from the moment that the utero-placental circulation is interfered with, the placenta becomes a foreign body, preventing the uterus from contracting properly upon, and so closing the open extremities of the uterine blood vessels, which alone can give perfect safety from hæmorrhage.

I now, in every instance, remove the placenta with the patient in the dorsal position; and, having tested both lateral and dorsal postures, decidedly prefer the latter. Its advantages over the *lateral*, during the expulsion of the placenta are—

1. It causes the placenta to be almost instantly expelled.

2. It prevents the admission of air into the vagina, or uterine cavity, and causes the expulsion of any that may have entered during or after the birth of the child. That air does sometimes enter the vagina, especially when the abdominal parities are relaxed and the patient in the lateral posture, is made evident by pres-

sure, or by turning the patient upon her back, when it will be audibly expelled.

3. It lessens the chances of post partum hæmorrhage, by placing the uterus, emptied of its contents, more perfectly under the control of the accoucheur than any other position.

Before I conclude I must call your attention to the very novel mode of treatment recommended by Dr. Mann, of Rhode Island, who has recently drawn attention to the injection of warm water (117 F.) in post partum hæmorrhage, as well as in that of abortion and placenta prævia. His views have been sustained by Dr. Windlebrand, who recently read a paper upon the subject. It is claimed to act by stimulating the uterus to immediate and firm contraction. They repeat the injection at intervals of a few minutes till the effect is produced. This requires to be further investigated.

I shall not occupy your attention longer. I have mentioned, very briefly, some of the chief points of the prevention and treatment of post partum hæmorrhage, which have been tried and found satisfactory. I have not stated theories, but tested facts. I hope that this short paper will elicit from the gentlemen of this Association some important facts from their experience respecting the subject.

Progress of Medical Science.

LECTURE ON FEVERS.

By Alfred L. Loomis, M.D.

Professor of Pathology and Practical Medicine in the Medical Department of the University of the City of New York.

TYPHOID FEVER TREATMENT.

Gentlemen:—Before speaking in detail of the treatment of typhoid fever, I will say a few words concerning its prevention.

If the modern theory (which I have already given you) of its etiology be accepted, the question naturally arises, cannot the typhoid poison be prevented from entering our dwellings, or polluting our drinking water?

Facts prove almost conclusively that typhoid fever is never of spontaneous origin. Should it occur in the locality where you may reside, if possible find out its origin. If no case has ever before occurred in the locality, endeavor to ascertain the manner in which the typhoid poison has been introduced. If it is already endemic, limit the disease to the first few cases by a most thorough disinfection, and remove all those surroundings which favor the reproduction of the typhoid poison.

If the theory is correct, that typhoid fever is dependent upon a poison contained in the excrement of a typhoid patient, then the poison should be destroyed as soon as it is discharged from the body. For this purpose the intestinal discharges should be recived into a porcelain bed-pan (not a tin one), the bottom of which should be covered with a thin layer of powdered sulphate of iron; immediately after the discharge, crude muriatic acid, equal in quantity to one-third of the fæcal mass, should be poured over it. Never empty the discharges from a typhoid patient (no matter how thoroughly they may have been disinfected) into the privy or water-closet used by the family. Trenches should be dug for their reception, and new trenches should be opened every few days; the greatest care should be taken that these trenches are not so situated that drainage from them can contaminate wells or springs which furnish drinking-water. All under-clothing or bed-clothing that may have become soiled by the discharges from the bowels should be immediately immersed in chlorine water, and thoroughly boiled within 24 hours. This procedure will certainly destroy the infective power of the typhoid poison contained in the intestinal discharges, and in the majority of instances you will prevent the spread of the fever.

Repeated observation shows that when one member of a family has typhoid fever, not unfrequently it is developed in every other member. This spread of the disease can be prevented, unless there is some local cause for its development which cannot be reached.

When its origin is not apparent, the wells, springs, and all the sources from whence water is derived for drinking and cooking purposes should be carefully and thoroughly inspected. Care must be taken that the waste-pipes from wells and springs do not pass directly into cesspools or sewers, and thus become a means of the conveyance of impure gases into the springs and wells.

The greatest care must also be exercised in regard to home drains and sewer-pipes, that they shall be free from leakage and obstruction, and that all water-closets, sinks, and other openings into them be provided with suitable traps.

When unpleasant odors are constantly present in dwellings, especially in sleeping apartments, disinfectants should be thoroughly employed, and the house be kept thoroughly ventilated.

When it may be necessary to open drains and cesspools in a dwelling for purposes of repair and cleansing, the same precautions should be exercised; these are especially of importance during the summer and autumn.

In conclusion, let me impress upon you this fact, that when typhoid fever is carried from

the sick to the healthy, the evacuations are the chief, if not the only means of contamination; consequently, the importance of thoroughly disinfecting the excrements of typhoid patients should always be borne in mind.

In this connection the question naturally arises, can we not counteract or neutralize the effects of the fever poison after it has gained admission into the system, and thus prevent the development of typhoid fever? To accomplish this, at one time blood-letting was resorted to; but at the present day few practitioners would venture to suggest such a plan of treatment, and few patients could be found willing to submit to it. Emetics were given on the supposition, that the fever poison acted primarily upon the mucous membrane of the stomach, and that the offending agent might be removed by their early administration, and thus its absorption into the system prevented. As it has been proved that the typhoid poison can be introduced into the system through other channels than the stomach, and as experience has shown that emetics have not the power to prevent the development of typhoid fever, their use has been abandoned. Diaphoretics have also been employed; but there is not the slightest proof that typhoid or any fever poison was ever removed from the system by sweating. A patient with some of the premonitory symptoms of fever may sweat, be relieved, and at once recover, but such a patient has not received the typhoid poison into his system, and was not, as is sometimes said, "threatened with typhoid fever."

Notwithstanding the bold affirmation of the author of the cold affusion plan of treatment, that if it were resorted to before the third day of the disease, it would invariably arrest its development, it has failed to stand the test of practical experience.

More recently, sulphate of quinine administered in large doses, has been thought to have the power of arresting the development of typhoid fever in the same way that it arrests malarial fever, by its anti-periodic power; but there is no evidence that it has any such power, and as a prophylactic remedy it has been abandoned.

I might go on almost indefinitely enumerating measures which have been resorted to for preventing the development of this fever; but after the poison has once gained entrance into the system, no means have as yet been discovered by which it can be counteracted or neutralized so as to prevent the development of this disease. The duty of the physician, so far as he may be able, is to guide the disease to a favorable issue, and prevent injury to organs essential to life, keeping in mind that a certain definite period must elapse before this result can be accomplished.

Before entering into a detailed account of the treatment to be pursued in the management of a case of typhoid fever, I will say a few words in reference to the arrangement of the sick-room of fever patients. Though often overlooked, this is a matter of no inconsiderable importance, not only as regards the comfort of the patient, but it has much to do with the successful issue of the case.

It is of the greatest importance that a properly qualified nurse be selected; one who has had experience in the care of fever patients is to be preferred. In the next place, the patient should be placed in a large and well-ventilated apartment. All furniture should be removed from the sick-room, except those articles which are necessary for the comfort of the patient and the convenience of the attendants. Remove the carpets from the floor, place your patient in a bed of moderate size in the centre of the room, and let there be free ventilation during both day and night.

The temperature of the apartment (if possible) should be kept below 60° F.

The bed and body linen of the patient should be changed daily, and at once be removed from the sick-room and placed in a weak solution of chloride of sodium; especially is this important if the patient is having frequent discharges from the bowels. The apartment should be kept perfectly quiet, the light subdued, and only the attendants should be allowed in the room.

These preliminary arrangements having been made we will suppose we have in charge a patient with a mild type of typhoid fever. All medicinal interference in such a case is unnecessary. The treatment resolves itself into the arrangement of the sick-room and proper diet; milk is preferable, fruits are not to be allowed in any case. In the mildest case the care in diet is important, and the patient should be kept in bed until convalescence is fully established. This should be insisted upon, even in the mildest cases.

As I have already stated, the temperature in a mild type of this fever rarely rises above 103° F.; therefore there is no necessity for resorting to antipyretic measures; frequent sponging of the surface with cold or tepid water, as is most agreeable to the patient, will be found of service.

By far the larger number of cases of this fever are of a more severe type, and, though in your treatment you must be guided by the circumstance of each individual case, usually you will be obliged to resort to more decided measures.

Remember that there are no specifics for this disease; all of those which have been proposed and employed have either fallen into disuse, or are resorted to only as aids in general treatment.

Typhoid fever is a disease that has certain stages to pass through, limited only by days and weeks. There is great doubt whether the physician can shorten its duration by a single day,

but experience warrants the belief that many lives may be saved by remedial measures used at the proper time, and combined with judicious hygienic management.

There are critical periods in this disease; be prepared by knowledge and judgment to carry (if possible) your patient safely through them. Unquestionably one of the most important things to be accomplished is the reduction of temperature, or rather the keeping of the temperature below a certain standard. Blood-letting, emetics, diaphoretics, cathartics, chlorine water and mineral acids have all been resorted to in order to reduce temperature. The last two agents were supposed to reduce temperature by neutralizing the typhoid poison. At the present day I think there is no intelligent physician who imagines he can neutralize the typhoid poison, and thus reduce temperature, while only a few years ago these agents were supposed to possess such power, and were very extensively employed for such a purpose by some very intelligent physicians.

The agents which more recently have been employed for this purpose, namely sulphate of quinine and cold applications, are powerful agents in reducing the temperature and lessening the severity of the disease; but they can never shorten its duration, and, if you employ them, expecting this result, you will be greatly disappointed. It is claimed by many very distinguished observers of the present day that the parenchymatous degenerations of the different organs and tissues of the body, which are found in those who die of typhoid fever, are due to the prolonged high temperature which is present during the course of this disease; but as yet there are no facts to prove this assertion, for the same parenchymatous changes are found in the bodies of those who have died of diseases, the course of which was not marked by high temperature, and did not extend over a period of forty-eight hours. So far as we are able by analogy to determine upon what these parenchymatous changes depend, we are led to believe that the specific poison of the disease has more to do with their development than the high rate of temperature. One thing must be apparent to every clinical observer: that the injurious effects of a prolonged high temperature are early and most markedly shown by disturbance of the cerebro-spinal system. It is still an unsettled question whether these disturbances are due to the primary changes in the constituents of the blood, which always accompany a high range of temperature, or to the direct effects of the high temperature on the nerve centres.

Whichever view we accept or adopt, the employment of those means which have the power of safely reducing temperature is indicated, and, when judiciously used, they have much to do with the safety of the patient.

All those means which have been employed for the reduction of temperature are included under the general term of *antipyretics*, and the treatment of disease by the use of these agents has received the name of *antipyretic treatment*.

Unquestionably the most efficient and reliable of the antipyretic agents are the external application of cold by means of baths, packs and effusions, and the internal administration of sulphate of quinine. The quinine is not administered to produce any specific action upon the typhoid fever poison, but is employed for its antipyretic power. There are other antipyretic agents besides these two, but they are of so little importance that it is necessary to give them only a passing notice after we shall have considered these two important ones.

At the present time, to a great extent, the opinion prevails that the application of cold to the surface is the great antipyretic in the treatment of fever. This is no new teaching. Long ago Dr. Currie recommended the application of cold to the surface of the body for the purpose of rapidly reducing temperature, and proved that it had such an effect; yet it was never very generally practised, and soon fell into disuse, as there was nothing reliable to guide one in its application. As we now have the thermometer to guide us in its application, more recently it has been resorted to with considerable success.

I will give you some general rules, which may be of service to you in the use of this antipyretic in the treatment of typhoid fever.

As soon as the axillary temperature in the evening rises above 103° F., place the patient in a water bath having a temperature of 70° F. or 80 F., and gradually lower that temperature by the addition of cold water or ice, until the temperature of the patient begins to fall. You may be compelled to lower the temperature of the bath to 60° F. before the temperature of the patient is affected; but the lowering of the body temperature must be accomplished by the lowering of the temperature of the bath, taking care that the latter does not fall below 60° F. When the temperature begins to fall, renew your thermometrical observations every two or three minutes. If it falls rapidly—that is, two or three degrees in five or six minutes—as soon as the fall has reached 103° F., remove your patient from the bath; if it falls slowly, as soon as it reaches 101° F. he should be removed and immediately placed in bed. Never keep the patient in the bath until the temperature shall have reached the normal standard; should you do so, he may pass from a condition of fever into a state of collapse, as the temperature continues to fall for some time after his removal from the bath. While in the bath, cold should be applied to the head by means of a sponge wet in cold water or by an ice-bag.

The cold pack is much less effective than the bath; but if the patient is too feeble to be moved, it may be employed with benefit. You should

wrap the patient in a sheet wrung out of tepid water, and over this sheet apply one wrung out of cold water. The latter may be removed as often as it becomes warmed; its application and removal may be continued until the desired fall in temperature shall be obtained.

In severe cases, during the first and second weeks, you will find that after the temperature has been reduced by the application of cold to the surface, it will begin slowly to rise until it reaches its former height. Usually one to three hours will elapse before it begins to rise, and from two to six before it reaches its former height. You will then be obliged to repeat the baths or packs, and to continue their use, both day and night, from three to six times during the twenty-four hours. if you expect to keep the temperature below 103° F. and accomplish anything by this plan of treatment. My experience in the use of cold applications leads me to believe that unless you are able to maintain a low range of temperature after four or five baths, you gain very little by their continuance. In other words, if, after using the baths for twenty-four hours, the temperature of your patient rapidly rises to the same or a higher degree than it was before their use was commenced, you will obtain little or no benefit from their continuance unless you can introduce some other agent which shall maintain the low temperature reached by the bath. I am also convinced that after the second week of typhoid fever, cold baths should not be employed to reduce temperature, for by their continuous use after that period they may do great harm. The condition of a typhoid patient during the first and second week of the fever is very different from that during the third and fourth week. During this latter period there is great danger of collapse after a cold bath, and in several instances I am confident that pulmonary complications have been the result. In a few instances the temperature can be very rapidly lowered by the application of ice-bags to the abdomen. The rapidity with which the temperature can be reduced usually depends upon the severity of the fever. In some cases, when the patient is placed in the cold bath, the temperature immediately begins to fall; in other cases there will be a gradual reduction of temperature as the water is made cooler. In certain severe cases, you may keep a patient in a bath of the temperature of 60° F. for the space of half an hour, without the temperature falling a degree. These cases are exceedingly grave in character, and you should use the bath with great care.

Finally, let me impress upon you that in typhoid fever, in order to reduce the temperature, you must not indiscriminately apply cold to the surface of the body. Perhaps there is no remedial agent which requires greater care in its use; yet doubtless, when judiciously employed, the lives of many typhoid patients may be saved, and it is equally certain that when injudiciously employed, many lives may be destroyed. If you use the cold baths in conjunction with other means for reducing temperature (concerning which I will speak at my next lecture), I am confident you will accomplish much; but if you rely only upon the baths, in the majority of instances you will be disappointed in the result. At the present time it seems to me, that by some, the benefit and power of cold baths in the treatment of typhoid fever have been overrated.

The general condition of your patient, and the stage of the fever must be considered; also the effects of the first few baths must be carefully noted.

Should a patient's temperature range at 104° F. or 105° F., there is no positive evidence that you must resort to a cold bath, or that a cold bath is the best agent to be employed for its reduction. Again, if the patient after the second or third bath is more quiet, has less delirium (if delirium previously existed), if his breathing becomes easy and natural, if the heart's action is more regular and forcible, and he falls asleep and perspires, there can be no question in regard to the beneficial effects of the bath. If, on the other hand, the bath is followed by feebler heart's action, by dusky cheeks, by rapid respiration, and by coldness of the extremities, from which condition the patient rallies slowly and imperfectly, you may be certain that however high the temperature may range, you will do harm by continuing the baths. When the extremities are cold, or there is profuse hemorrhage from the bowels, or when from any cause, there is great feebleness of the heart's action, and especially in the case of aged persons, cold baths are contra-indicated.—*New York Medical Record.*

CASE OF DISLOCATION OF THE HIP REDUCED BY THE USE OF THE FULCRUM.

By J. H. Pooley, M.D.

Professor of Surgery in Starling Medical College Columbus, Ohio.

In the April and September numbers of the *American Practitioner* for the present year, I was very much interested in two short communications by Dr. George Sutton, Aurora, Ind., on the use of the fulcrum in the reduction of dislocations of the hip. The principle there advocated struck me as being sound and rational, as well as exceedingly simple, and the illustrative cases seemed very convincing. I determined upon the first opportunity that should occur to put it to the test of actual trial, and having done so I am more than ever convinced that it is a most valuable addition to our resources in dealing with this sometimes very troublesome class of injuries. And as every actual trial of a new

expedient in surgery is of value in settling the usefulness of the proposed improvement, and as I feel it to be due both to the profession and to Dr. Sutton, that, for a time at least, all the cases in which his method is employed should be recorded, I publish the following account of my case:

October 19, 1876, I was requested by Dr. A. Dunlap, of Springfield, Ohio, to see, in consultation with him, a case of dislocation of the hip, in which he had failed to effect reduction after a fair and repeated trial of the ordinary method of manipulation. The patient, the wife of a farmer residing near Catawba, Clarke county, Ohio, about fifteen miles from Springfield, had been thrown from a wagon the day before—October 18th—about four o'clock in the afternoon, and sustained a dislocation of the left hip. She had been first seen by Dr. John Clarke, of Mechanicsburg, who had been unsuccessful in his attempts at reduction. Dr. Dunlap had then been sent for, and had made repeated attempts to reduce the hip, but also without success. All these attempts had been by manipulation; pulleys had not been used.

I arrived at the house early on the morning of the 20th, about three o'clock. I found the patient—a spare, nervous woman of thirty-three—in bed suffering considerably from pain, and severely from nausea, the result of chloroform which had been administered on several occasions.

The left limb was an inch and a half shorter than its fellow, the foot very slightly everted, and the head of the bone could be plainly felt in front of the ilium, just above the acetabulum. Dr. Dunlap informed me that the dislocation had been primarily on to the dorsum ilii, and the present position of the head of the femur was the result of the last manipulation. It had been found, on manipulating it, to be extraordinarily movable, and had been carried once or twice into the thyroid foramen, and also up on the ilium just above the acetabulum, in which situation I found it. In fact it would go almost anywhere except into the right place. Dr. Dunlap said that he had carried it right across the acetabulum on two occasions, and as he did so, he felt a distinct crushing crepitus, but it went over, and not in. His belief, which I presume was correct, was that a portion of the lip of the acetabulum was broken off, and as the head of the thigh-bone was brought up against this broken portion, it was forced before it, and partially filling up the acetabular depression, prevented it from going in, and guided it over on to the other side instead.

I directed, according to Dr. Sutton's plan, a firm cylinder to be made, by tightly and evenly rolling two sheets, which was three inches in diameter, and about two feet in length; it was firmly tied round with narrow strips of bandage to prevent it unrolling. The patient was now anæsthetized with a mixture of alcohol, chloroform, and ether, and laid upon a firm, narrow mattress, laid upon the floor. The cylinder, prepared as described, was now placed across the upper part of the thigh in the groin, and firmly held at each end by an assistant; over this, as a fulcrum, Dr. Dunlap made the manipulations, while I attempted to follow the excursions of the bone with my fingers. Drs. Clark and Newcomb, of Mechanicsburg, Drs. Beach and Hunter, of Catawba, and Dr. C. W. Dunlap, were also present and assisting. The first two attempts failed as I very plainly saw, from not fully carrying out the principle involved in the use of the fulcrum; that is by abducting the knee before complete flexion of the thigh over the cylinder had been accomplished. The first time the head of the femur lodged in the thyroid foramen; the second time at the top of the ilium, where it was when we began; it had skirted round the base of the acetabulum, without rising to its level, much less going into it.

The trial, in which the principle of the fulcrum was deliberately and thoroughly carried out, was perfectly and speedily successful. The thigh was slowly and fully flexed on to the abdomen over the fulcrum, the head of the bone was lifted up to the level with the acetabulum, and when the knee was abducted, and the motion of bringing the thigh down barely commenced, it slipped in with a distinct snap; the limb was found to be restored in length and position, and the dislocation was reduced. A broad, firm, pelvic bandage was applied, and the patient returned to bed.

This may almost be looked upon as a test case for the new method. Ordinary manipulation had been tried by skilful hands, in which it had never before failed; and I think that there can be little doubt that Dr. Dunlap's explanation of his failure was the correct one. What was wanted then was some means by which the head of the femur could be carried up to a level with the top of the acetabulum, and thus prevented from pushing the broken acetabular rim before it; this was found in Dr. Sutton's method, the obstacle was overcome, and the reduction accomplished.

It seems to me, therefore, that we are indebted to Dr. Sutton for a valuable improvement; and I do not know a more beautiful and philosophical piece of practical surgery, than the reduction of a dislocated hip by Reid's manipulation performed over Sutton's fulcrum.—*American Practitioner.*

LECTURE ON EYE DISEASES AND INJURIES.

Nature's Protection to the Eye.—The provision made by Nature for the protection of the eye from injury is of so perfect a character that it is not as much subject to serious lesions as might be expected; and when we consider how vul-

nerable to attack, how easily destroyed by slight injuries, and how vitally essential to the efficient working of the human machine the eye is, our admiration of the means provided for its protection is enhanced. Though the eye must necessarily be presented to all attacks, and used directly in all manual processes, and is thus, under all circumstances, placed in the most likely position for injury, it is relatively but seldom that it sustains a destructive injury, and it enjoys comparative immunity from the extensive lesions which every day present themselves as the result of blows about the face. The lightning speed of this warning from the eye to the brain and back again to the lid-muscles is almost inconceivable.

You must have observed this fact for yourselves, for in the daily run of hospital injuries all parts of the face and head seem to suffer more than the eye, though it is usually the object selected for attack.

Let us consider what it is which affords so sure a guard to the eye.

In the first place, the strong orbital ridges of the frontal, malar, and maxillary bones, effectually bear off blows from any body larger than the eye itself; while the eye keeps guard, and by giving the signal for a rapid jerk of the head, and the involuntary and spasmodic closure of the lids, protects the globe from the access of smaller bodies. A remarkable instance of this has been recently noted in the medical journals. A chemist was examining a small bottle of explosive liquid between his eye and the light, at half arm's length. By a shake the liquid exploded, and the fragments of the bottle and its contents were violently scattered. On recovering from the shock of the explosion, which was so violent as to blow him off his feet, the chemist at once felt that his face and lids were severely burned. To his great relief, he found, however, that his eyes were perfectly safe, the small fraction of a second which the contents of the bottle occupied in traversing the distance from hand to eyes, had sufficed for the retina to receive its impression, to transmit the signal to the brain, and for the brain to issue its order to the orbicularis palpebrarum, which closed tightly in compliance. That this latter protection is of great importance is proved by the frequent occurrence of accidents to one eye, when the other has been previously lost.

With lightning speed the retina transmits to the brain its warning of danger. By an instantaneous, almost convulsive and involuntary movement the head is removed from the direction of danger, and the eye is tightly covered by the lid; even if the blow or missile take effect in the exact direction of the eye, the whole force is sustained by the anterior arches of the orbit, if it be too large to penetrate within the cavity; and if sufficiently small to enter, it meets with nothing on which to expend its force, except a hard light, slippery globe, resting on a cushion of fat, and free to escape in any direction from the pressure.

The lashes, also, acting as a sort of grating or sieve, entrap all sorts of minute objects, which, should they, in spite of all these protections, obtain an entrance, are met by an instantaneous deluge of tears which carries them away before they can inflict any injury.

In addition to these extrinsic protective provisions, the eye derives its greatest security from its own perfect mobility, and the elasticity of the cushion of adipose and cellular tissue on which it rests, and from the extreme strength of the sclerotic; so that, while the body of the eye itself will bear almost any amount of violence from a blunt or rounded missile, the structures on which it rests will receive without injury the greater part of any shock which may be communicated to it. The every-day proof of this fact is, that amongst the thousand black eyes given and received, rupture of the eyeball is a rare accident.

Ecchymosis beneath the Conjunctiva.—Proceeding now to the injuries of the eye-ball itself, and to some of the consequences therefrom, I present to you, firstly, an illustration of an ecchymosis beneath the conjunctiva (Fig. 1), with the appearance of which it is necessary that you should be familiar, as you may easily be deceived respecting the gravity of the accident by the very alarming appearance which the eye presents. Sub-conjunctival ecchymoses are more usually caused by a slight scratch than by a heavy blow, and are very commonly the result of great straining on the part of the patient, either in coughing or retching, especially those who are in the anœmic condition which encourages small hœmorrhages under the skin, and in such cases there need be no injury at all. In this way ecchymoses are frequently observed in cases of purpura, and occasionally in Asiatic cholera. The effusion of blood beneath the conjunctiva may be distinguished from any other form of vascularity—

a. By its brilliant uniform scarlet, velvety surface, when recent, which completely hides the sclerotic.

b. By the absence of any visible blood-vessels.

c. By the irregular ragged edge.

It may be so large as to occupy the whole sub-conjunctival cellular tissue, and to raise up the conjunctiva into folds, or it may amount to no more than a small scarlet spot on the sclerotic. It never invades the corneal conjunctiva, because the attachments of the conjunctiva to the anterior elastic cornea are much closer than those which connect it with the sclerotic.

Treatment.—Surgical interference for sub-conjunctival hæmorrhage is neither necessary nor effective. If the patient will wait, the ecchymoses are best let alone, and they will go through the sequences of colour usual in the case of a black eye, until they finally disappear in eight

or ten days. If the effusion be excessive in any one spot, the conjunctiva may, without fear of mischief, be divided, and the blood squeezed out; and if a patient be impatient for restoration of good looks, a lotion may be prescribed to aid absorption.

The following is the formula which I have used, but I do not claim for it any very decided effect:—

℞ Potass. iodid., ʒ ij;
Tr. Arnic. montan., ʒ jss.;
Aq. rosami, ad., ℥ j;
p. lotio.

The following collyrium, though inelegant, is more effective:

℞ Ol. jecor asel., ℥ j.;
Pot. iodid., gr. v;
Iodinii., gr. j.
p. collyr.

Compression is a very useful procedure, when it is desired to effect absorption, and a compress of lint soaked in an unirritating lotion of iodide of potassium, and bandaged tightly on the eye will be suitable in the treatment of persons who can adopt it.

Lacerations of the Conjunctiva.—Conjunctival lacerations are very common, and usually quite unimportant in their effects. The eye is watery looking, and the secretion of tears increased; the conjunctiva may also be slightly injected, the patient complaining of feeling as if a grain of sand was under the lid, or a hair turned in upon the eye. There is usually some difficulty in finding the situation of the laceration, on account of the transparency of the conjunctival fold.

Treatment.—If the laceration be small it will be sufficient to keep the lid closed, and apply a cooling lotion externally. If very large, it will be necessary to place the edges of the wound as nearly as possible in apposition and introduce a couple of the finest silk sutures, closing and bandaging the eye afterwards to prevent motion.

Burns of the Conjunctiva.—The conjunctiva may be the subject of extensive destruction by burns—the most common forms of the injury being from gunpowder, from quicklime, and from sulphuric acid in cases of vitriol-throwing. Of these, the burn by lime is that which more especially affects the conjunctiva, while the injuries by gunpowder and vitriol usually involve the whole eye, and frequently end in its destruction. I have also seen eschars of the conjunctiva from a splash of whisky thrown in the face, and such burns have seemed to me much more severe than the strength of the spirit would seem to account for, whence I conclude that the cheap fiery liquids sold in low public houses must contain something—perhaps capsicum—more irritating than pure spirit.

Injury of the Eye by Lime.—This form of injury, which is beautifully depicted by the late Mr. Wardrop in his work on the eye, from which I have copied the illustration, is common amongst bricklayers' labourers, in consequence of the ebullitions which take place in the hasty slacking of lime, and which are sometimes strong enough to splash the lime into the eye. However happening, the injury is very dangerous, and the more so because the effect of the caustic alkali is rapid, and the patient is seldom seen until much mischief is done. The first effect of pure lime is to disintegrate or burn the entire conjunctiva wherever it lodges, and even to destroy the corneal surface in the same way. If the lime only lodges in spots, those parts of the conjunctiva will suffer and the remainder escape, because the lime being insoluble does not spread to any serious extent, and, moreover, the process of slacking absorbs all the tear-water, and the deposit is, therefore, not washed away. Commonly, even when the lime is in the form of mortar, the conjunctiva is removed from the entire cornea, which then appears as a dull opal-coloured surface surrounded by the chemosed conjunctiva, and appearing as if buried in a pit in the surrounding vascular tissues. Vision is almost *nil*, the pain violent, but of a smarting rather than an aching character, and the flow of tears excessive. If the conjunctiva be burned off only in patches these places will appear as shallow depressions usually with the cake of lime adherent to their bottoms.

Treatment.—The first indication is to remove the lime very thoroughly, which, in consequence of the closeness of its adhesion, is a troublesome and painful proceeding. The eye-lids should be fully everted, all that can be removed by a camel's hair-brush taken off, and all that cannot, picked away by forceps or even dug out if necessary with the needle or Walton's gouge. The deepest part of the conjunctival fold often contains a quantity of the lime, which may be overlooked if not searched for. When the large portions are removed, the surface should be syringed with weak vinegar and water, which will form with the remaining small particles an innocuous acetate of lime. The removal of the lime having been completely effected, a drop of atropine should be instilled, and then a couple of drops of fine oil or sweet glycerine and the lids closed. Astringents, such as weak nitrate of silver solution and sulphate of zinc are sometimes recommended, but I have found them very irritating in such cases and worse than useless. Acetate of lead lotions must be specially avoided, as they will deposit a coating of insoluble chloride carbonate and albuminate of lead in the ulcerated surface, which will heal in and remain as a permanent stain. According to the extent of the injury, the subsequent treatment must be directed to allay inflammation. Cooling lotions externally will be suitable in slight cases, those more severe will require leeching to the temple and poulticing.

Effects.—If burns of the conjunctiva be superficial and not involving the whole thickness of

the membrane, the damage will be quickly repaired by the reproduction of epithelium, and no perceptible scar will remain. Mr. Lawson in his works on "Injuries of the Eye" says:—"If the injury extends deeper than the epithelium, so as to include the connective tissue in which it rests, the whole thickness of the mucous membrane will be destroyed and a slough will form, which will slowly separate before any attempt is made to repair the gap. When such complete destruction of the part ensues, the space is not filled up by a growth of new tissue, but the wound is gradually closed by a drawing together of its sides and a contracted cicatrix is formed." This statement is accurate when applied to extreme cases, but it must not be assumed that contraction and adhesion of the lids will occur in all cases in which the conjunctiva is totally destroyed, for I have seen more than one case of lime-burn in which the cornea seemed absolutely bare, and which, nevertheless, received a fresh conjunctival covering after a few weeks. The special danger of deep burns of the conjunctiva—especially those which involve the palpebral as well as the ocular eonjunctiva—is the occurrence of symblepharon or adhesion of the ulcerated surfaces in the act of cicatrisation. Frequently, the adhesions are more extensive and irremediable, and the attention of the surgeon must be devoted as much to prevent them as to allay inflammation or restore sight. In these cases of lime-burn—especially when the lime has been but partially slacked before it enters the eye—it is unfortunately but seldom that the injury is restricted to the conjunctiva. Very frequently the cornea is burned, sometimes even to the greater part of its thickness, and a slough is the result, with partial or entire destruction of the eye. In treating these cases, the lids must be separated each day, in order to prevent adhesions of the conjunctiva to the ocular globe, and the greatest injury is commonly done by uneducated people, who bandage up the eye and leave it so until the pain and discharge abate.

When the eye is opened, the sloughs if there be any, should be lifted off, and the surface cleaned with a syringe, and if there seem to be a tendency towards adhesion and contraction—which is most commonly found in the sinus of the lower lid—a small slip of lint may be placed so as to separate the approximated parts. Local applications introduced between the lids must be emollient, such as sweet oil or fresh glycerine. If astringents be admissible I think, vin. opii. is the most advantageous. It will be readily understood that, inasmuch as the slough must be cast off, it is better to aid their elimination in every way, and there will be no use depleting the patient to avert inflammation which will be more properly dealt with as it arises.—*Dublin Medical Press.*

IODOFORM FOR BURNS.

Dr. Bedford Brown, in a valuable article on "The Pathology and Treatment of Burns," in the *Philadelphia Medical Times*, says that of all local treatment he prefers iodoform, in the following formula:—

℞ Iodof..... 3 ij.
Ung. cetacei..... 3 j.
Ext. conii ..... 3 jss.
Acid. carbolici..... gt. x.

This, spread on fine linen, is applied twice daily to the inflamed surface, which is then enveloped in oiled silk, no other dressing being required. If there is great dryness of surface from destruction of vitality and want of exhalation, the wound, before applying the ointment, should be coated with the common linimentum calcis, which affords a soft and moist dressing, and in no wise interferes with the action of the iodoform. The iodoform acts as a certain and most effective sedative on the painful and exposed surface, and at the same time as an antiseptic. It reduces inflammation and suppuration, when in excess, in a remarkable manner, promptly converting a most painful and irritable wound into one that is comparatively painless. It is also an excellent promoter of healthy action and healing process, and has, besides, the great advantage of rendering the use of anodynes unnecessary.

We may add, apropos of the external use of iodoform, that, according to the *Doctor*, etherial solution of iodoform may be brushed on any surface. The coat of iodoform left is odorless—a great advantage in cases where the peculiar smell of the drug is objected to.

PLAIN DIRECTIONS FOR PREVENTING THE SPREAD OF INFECTIOUS DISEASES:

Small-Pox, Scarlatina (Scarlet Fever), Measles, Typhus Fever, Enteric (Typhoid or Gastric) Fever, Hooping Cough, Diphtheria, Etc.

By J. M. MACLAGAN, M.D., Medical Officer of Health for Hexam and Haltwhistle Unions Rural Sanitary Districts, Etc., Etc.

General Directions.—I. When a case of infectious disease occurs in a house, immediate notice thereof should be given to the Medical Officer of Health or to the Inspector of Nuisances, and medical advice at once procured.

The following precautions should be taken

1. *Isolate the person affected as much as possible from the other inmates of the house.*

This is most readily affected by at once removing him to an upper room, if circumstances permit. The room selected should be large and airy, and the means of ventilating it, which shall be presently mentioned, at once adopted.

2. Before removing the patient, the following preparations ought to be made in the room:

All superfluous *curtains, carpets, woolen articles, unnecessary clothing*—in short, *everything likely to retain infection*, should be *at once removed.*

3. The patient's *bed* ought to be so placed as to allow of a *free current of air* around it, but not so as to place it in a *draught.*

4. *The room must be kept well ventilated*, under the physician's direction, by means either of a fire (when required) or of an open fire-place and chimney, and of windows opening to the external air. By means of the latter, ventilation is most effectually procured, so as to avoid draughts, in the following manner:

Raise the lower sash of the window three or four inches, then procure a piece of wood made to fit accurately into the lower opening, and place it there. By these means free outward and inward currents of air—without causing any draughts—are obtained through the vacant space between the two sashes. *When a window is merely opened from the upper or lower sash, draughts are invariably caused.*

5. Placing a small sheet of oil-cloth, mackintosh, or other waterproof material, beneath the upper blanket on which the patient is to rest, effectually prevents the bed from being soiled by any discharges, etc.

II. After removal of the patient to the room in which he is to remain, the outside of the door and door-posts should be completely covered by a sheet kept constantly wetted with some disinfecting fluid, such as *Burnett's Solution, Condy's Fluid, Carbolic Acid, etc.*

2. The room must be kept scrupulously clean. Before being swept, which should be done daily, *if possible*, the floor should be sprinkled with *Culvert's* or *McDougall's Disinfecting Powders*, or with a weak solution of one of the disinfecting fluids already mentioned.

3. Vessels containing disinfecting fluids should be placed in the room for the reception of all bed and body linen, towels, handkerchiefs, etc., immediately on being removed from the patient, and on no account should they be washed along with other household articles.

4. Disinfectants should also be placed in all the chamber utensils used by the patient, and, after use, more disinfecting fluid should be added, and the whole contents, if possible, should be immediately *buried. No chamber vessel should be allowed to remain in the room after having been used.*

5. All plates, cups, glasses, etc., which have been used by the patient, should be rinsed with some disinfectant before being washed; and on no account should any vessels used in the sick room be washed along with other things, unless previously thoroughly disinfected.

6. Attendants on the sick should not wear woolen dresses, but only those made of washing materials.

7. Basins containing water, to which some disinfectant has been added, should always be at hand for the benefit of the attendants on the sick, who should not be sparing of their use.

8. No article of food or drink from the sick room should be consumed by other persons.

9. Visitors to the sick room, except in the case of *clergymen* and *medical men*, should be peremptorily forbidden; and they, when necessarily present, should, on leaving, wash their hands in water to which a disinfectant has been added, and should have as little immediate communication with others as possible.

III. When a death from infectious disease occurs, the body should be at once placed in a coffin and sprinkled with some disinfecting fluid or powder, such as *chloride of lime, etc.*, and *buried with the least possible delay.*

2. *On no account whatever should it be allowed to remain in a room occupied by living persons.*

IV. *On the termination of a case of infectious disease*, either when the patient is pronounced *free from infection*, or, in the event of *death*, after *removal of the body*, the sick-room and its contents should be thoroughly cleansed and disinfected.

2. The bed and bedclothes, and all wearing apparel used by the attendants or patient, should be *thoroughly disinfected.*

V. In houses where a case of infectious disease occurs, no *washing, tailoring, dressmaking*, nor any similar occupation ought to be carried on

2. No *milk* or *food* of any kind should be supplied from infected houses.

3. *Children* from infected houses should not be allowed to *attend schools*, and *all persons* from infected houses should have as little communication as possible with others either in *private houses* or in public places, such as *railways, omnibuses, public-houses, churches, etc.*

4. Any accumulation of *filth* or *refuse* of any kind should be at once removed from or about the premises, and *disinfectants freely used.* If this cannot be done by the persons themselves, immediate notice should be given to the *Inspector of Nuisances.*

5. The existence of nuisances of any kind and wheresoever situated should be at once reported to the *Inspector of Nuisances.*

VI.—During the prevalence of *epidemic, infectious* or *contagious diseases*, it becomes specially important that the general laws regarding the preservation of health should be rigidly attended to.

2. Implicit trust should not be placed in so-called "*disinfectants.*" They are very useful when judiciously employed, but are by no means *certain* "preventives of disease."

3. *Pure air, pure water, warm clothing* and *good food* should always be obtained if possible. By their constant use less chance is afforded for an invasion of disease.

4. *Temperance* both in eating and drinking is

essential for the maintenance of health and the prevention of disease.

5. *Overcrowding* in houses, workshops or schools should be strictly prohibited.

6. All houses, cottages, schools and public rooms should be kept clean and well ventilated; and frequent use of lime-washing on the walls and ceilings should be made.

Special Directions.—I. Scarlatina and Scarlet Fever are one and the same disease. It is very infectious. A very *mild* case may give rise by infection to a very *severe* one. Infection is contained in all discharges from the body during the progress of the disease and recovery; but more especially from the skin during convalescence, and when the cuticle is being shed. The dry particles which are separated from the skin are highly infectious, and retain their infectious nature for an unknown time, unless thoroughly disinfected. They are disseminated through the air, and become attached to articles of furniture, clothing, draperies, and wall papers, etc. Thus the disease may readily be conveyed from one person to another by those who are not themselves suffering from it. It is also conveyed, as has been mentioned, by bedding, clothing, furniture and other articles, and by rooms which, having been exposed to infection, have not had their floors, ceilings, or walls disinfected, or had the wall papers removed.

No child should be permitted to go to school from an infected house, and communication of such in play or otherwise with healthy children should be prevented.

When a person has had the disease, he should not be permitted to mix with others until he has perfectly recovered and has had his clothes thoroughly disinfected; and not even then without the permission of his medical attendant. Nor is it advisable that any one who has had the slightest communication with a person suffering from the disease should go to any church, meeting, public-house, fair, or market, etc. Neglect of these precautions is a prolific cause of the spread of this disease.

Attendants on persons suffering from *Scarlatina* should be chosen, if possible, from those who have already had the disease.

"It is believed that the dispersion of contagious dust from the patient's skin is impeded by keeping his entire body (including limbs, head and face,) constantly anointed with oil or other grease; and some practitioners also believe this treatment to be of advantage to the patient himself. When the patient's convalescence is complete, the final disinfection of his surface should be effected by warm baths, with abundant soap, taken on three or four successive days (under the direction of the medical attendant), till no trace of roughness of the skin remains. After this process, and with clean clothes, he may be deemed again safe for association; but, previously to this, however slight may have been his attack, he ought always to be regarded as dangerous to persons susceptible of Scarlatina."—MR. SIMON, *Medical Officer to Privy Council.*

II. Small-Pox.—Infection from this disease is contained in all matters passing from the patient—in the breath and from the skin, in the *matter* contained in the "pocks," and in the dried scabs of the latter.

Vaccination, carefully and efficiently performed, is the only means of preventing or modifying this disease, and by it an almost certain immunity from *death* by this disease is conferred. No doubt cases do occur after vaccination, but they are milder in character than those occurring in the unvaccinated. After several years' interval, *re-vaccination* ought to be had recourse to; and whenever the disease is present as an "epidemic," every person should be vaccinated, whether he has been so previously or not; and at such times all *unvaccinated children*, whatever may be their age, if in a fit state, should be vaccinated without any delay.

There is nothing which has been more certainly proved than the fact that vaccination saves annually thousands of lives, and therefore no attention ought to be given to those ignorant and foolish persons who are constantly circulating absurd ideas regarding it.

Persons attending on patients suffering from small-pox, should themselves have had the disease, or should recently have been re-vaccinated.

III. Enteric (*Typhoid or Gastric*) Fever.—The mode in which infection is chiefly spread in this disease is by the poison contained in discharges from the patient's bowels, and lasts certainly as long as these discharges continue to be unnatural. It is believed, however, by some, that this disease is infectious in other ways. These discharges infect the surrounding air, the bed and body linen, and also all places used for their reception. Thus, if placed in a water-closet, cesspool, drain, privy, or ashpit, the sewers of a town or village, and through them the drains of houses, may, under certain circumstances, be the means of disseminating the disease. When drains into which these discharges have been thrown pass near to wells, the water contained in the latter has frequently been found to be perfectly unfit, indeed dangerous, to use. By faulty construction of such drains, soakage is frequently caused either into wells or into the surrounding ground, rendering them directly the means of spreading the disease. Cisterns may become contaminated by having their overflow pipes terminating in drains: and even water supplied by a water company may become infected by gas being drawn into defective pipes during an intermittent supply.

Milk has frequently been found to be a fruit-

ful medium for conveying the disease, either from having been placed in infected air, from which it has absorbed the poison, or from *milk-pails* having been washed, or the milk adulterated, with water containing the infection.

Great care should therefore be taken as to the source of the household milk supply.

The most certain and most deadly manner in which the poison of *enteric fever* is conveyed is by contaminated drinking water. The most certain way of preventing this contamination of water is by immediately destroying the poison contained in the discharges as soon as they are passed by the patient.

Disinfectants should be placed in the chamber utensil before use; and immediately after being used more disinfectant should be added. Above all things, the use of disinfectants should be frequent and copious.

The patient ought also to expectorate into a vessel containing some disinfectant.

All sheets, towels, handkerchiefs, &c., which have been used by the patient should be thoroughly disinfected, and afterwards carefully washed.

In all cases of infectious disease, it may be as well that the patient use rags or pieces of old linen, &c. (in lieu of pocket-handkerchiefs), which may afterwards be burned.

When the bed or body linen is soiled, the soiled spots should be sprinkled with some disinfecting powder.

A small sheet of gutta-percha, mackintosh cloth, or other water-proof sheeting, placed below the upper blanket under the patient's body, effectually protects the bed from discharges, and is especially useful in this disease.

After the performance of any duty about a patient, the attendants should wash their hands freely in disinfected water.

The discharges should *never* (if it can possibly be avoided) be placed in a privy or water-closet, but should, after complete disinfection, be buried deeply in the ground, at a distance from any drain, well, or watercourse. On no account should they be thrown on to any ashpit or dunghill, nor into any cesspool.

IV. Other Infectious Diseases.—It is quite unnecessary to prescribe special rules for the prevention of the spread of *Typhus Fever*, *Measles*, *Diphtheria*, *Hooping Cough*, *&c.* The general directions given are sufficient guides as to what is necessary in cases of those diseases. Many recommendations might be made regarding them, but these belong more to the duties of the medical attendant than to the Medical Officer of Health, and therefore are omitted here.

Directions for Disinfecting Rooms.—Rooms which have been occupied by a person suffering from *infectious disease* should, on the termination of illness, be at once disinfected. To effect this thoroughly, all crevices round windows and doors and the fireplace should be closed by pasting pieces of paper over them. Lumps of sulphur (brimstone), one pound for every thousand cubic feet of space, should then be put into a metal dish, placed by means of tongs over a bucket of water. This being set fire to, the doors should be closed, and the room should be allowed to remain without interference for three or four hours. After this time the windows should be thrown open, and when the fumes have disappeared, all the woodwork and walls should be thoroughly washed with soft soap and water, to which *carbolic acid* has been added (one pint of the common liquid to three or four gallons of water), and the paper from the walls stripped off. In whitewashed rooms the walls should be scraped, and then washed with hot lime, to which *carbolic acid* has been added. The windows should then be kept open for thirty-six or forty-eight hours.

Directions for Disinfecting Clothing.—The best mode of effecting this is by the agency of *great heat*, and when this is possible no other plan need be tried. Unless, however, there are places built on purpose, this agency is hardly procurable. Failing this, *boiling* clothes in water to which some disinfectant has been added should be employed. *Carbolic acid*, one part of pure, or two parts of commercial acid to one hundred parts of water, is sufficient.

Woollen clothing cannot be treated in this manner, but must be exposed for some time to the fumes of *sulphur*, and afterwards freely exposed to the action of the sun and wind. Other methods of disinfecting linen and other washing materials may be used.

One gallon of water containing two ounces of *chloride of lime*, or one fluid ounce of the solution of that substance or of *Condy's Fluid*, or four ounces of common *carbolic acid* solution, may be used. In this the clothes should be steeped thoroughly, and afterwards placed in boiling water, or simply boiled. If *Condy's Fluid* be used, the clothes should be merely immersed, and not allowed to remain for any time, otherwise they will be stained, but they must be rinsed in clear water. If any other disinfectants can be readily had, it is better not to use *Condy's Fluid* for this purpose.

Directions for Disinfecting Discharges of persons Suffering from Infectious Diseases.—There are several disinfectants which may be used for this purpose.

1. Two pounds of *sulphate of iron* (copperas or green vitriol) dissolved in one gallon of hot water, may be used either hot or cold.

Half a pint or so of this solution should be placed in all chamber vessels likely to be used by the patient when empty, and the same quantity should be poured over the contents after use.

2. Quarter of a pint of *Calvert's Liquid Car-*

bolic Acid in one gallon of water may be used in the same manner.

3. A like quantity of *Sir Wm. Burnett's Disinfecting Fluid*, or,

4. Of *Condy's Fluid*, may be similarly employed.

Directions for Disinfecting the Hands of Attendants.—After any duty connected with a patient suffering from *infectious disease*, the hands of attendants should always be put into one of the above solutions, prior to being washed in clear water.

Directions for Disinfecting Privies, Ashpits, Water-closets, Drains, or any Offensive Places.—Two or three pounds (according to circumstances) of *sulphate of iron* (copperas or green vitriol) dissolved in a gallon of water, may be thrown into the place requiring disinfection, in quantities of one quart or upwards, according to the necessities of the place, and repeated so long as offensive odors exist.

Carbolic Acid, Burnett's Solution, Condy's Solution, Calvert's or McDougall's Powders, and Cooper's Patent Salts (the latter are inexpensive and not dangerously poisonous disinfectants), may all be used, either separately or in conjunction, for this purpose. All these articles when sold have full information regarding the quantities necessary for different purposes given with them.

It must be remembered that most of these disinfectants are very poisonous, therefore great care in their employment must be taken. They should be kept entirely out of the reach of children, should not be put into bottles or receptacles generally used for other things, and should invariably have a "Poison" label attached.

With regard to the employment of *disinfectants*, it should be distinctly understood that they are merely *aids* in preventing the spread of infectious diseases, and that they must not by any means be trusted too entirely for that purpose.

In the event of *sewer gas*, continued *offensive odors*, or *constant sickness* occurring in a house, proper workmen should be obtained in order to see if any structural defects exists in sinks, drains, water-closets, privies, &c. If such should exist, disinfection merely will be of no avail.

GENERAL DIRECTIONS FOR THE PRESERVATION OF HEALTH.

I. HABITATIONS.—All dwellings should be free from dampness, be freely ventilated, and have abundance of daylight.

1. "*Overcrowding* in houses is very injurious to health. Any house or part of house, so overcrowded as to be dangerous or injurious to the health of the inmates, whether or not members of the same family, shall be deemed a nuisance, liable to be dealt with summarily in manner provided by the Act."—38 and 39 Vic., chap. 55, sec. 91.

2. *Cleanliness* is essential to the preservation of health. The ceilings of houses should be frequently whitewashed and the rooms freely swept and the floors washed.

3. *Fresh air* should be admitted into all bedrooms in the morning, by opening windows and doors. Bed coverings should be thrown down and exposed to the air for some time before the bed is made.

4. Chamber vessels should not be allowed to retain their contents and remain in any room longer than is absolutely necessary.

II. CLOTHING.—The body should be well covered. In winter or cold weather, flannel should be worn next the skin. In summer, if flannel be found too oppressive, some lighter fabric may be used, but this should invariably be *woollen*. Linen should be frequently changed.

III. FOOD.—Food should be plain, wholesome and fresh. Meals should be taken, if possible, at regular periods. Infants should have no other food than breast milk until the first appearance of teeth, when small quantities of light farinaceous food may be given in addition. If there is a deficiency of breast milk, cow's milk diluted according to circumstances with tepid water and a little sugar may be given. No child ought to be older than nine months before being weaned.

IV. PURE DRINKING WATER should always be used. No water which can be suspected of containing any contamination from sewers, privies or drains, should ever be used. Pure water should be clear, colorless and free from smell, but all such water is not necessarily pure, but may contain sewage, although it is bright and sparkling. All water should be filtered; but filtration will not separate sewage, but will only separate solid matters. A cheap filter may be easily made thus: Plug the hole of a flower-pot loosely with a piece of sponge, place a layer of powdered animal charcoal about one inch thick, then a like quantity of clean sand, and on that some coarse gravel. These should be frequently changed. The charcoal may be burned over again. It is a wise precaution, when any doubt exists as to its purity, to *boil* water before use.

V. EXERCISE.—A moderate amount of exercise should be taken daily.

VI. MEDICINE should never be taken except by the advice of a physician, unless under very ordinary circumstances. Persons who are perpetually physicking themselves are never in a healthy condition, either bodily or mental.

It would be quite impossible, and beyond the scope of these "plain directions," to give fuller directions for the "preservation of health." When in any difficulty, it is wise at once to consult a medical man.

HOW TO CURE A COLD IN THE HEAD.

By Dr. David Ferrier, Assistant Physician to King's College Hospital.

[We all know the miseries of a cold in the head, and the inconvenience arising from it. Dr. Ferrier having succeeded in arresting one with which he was threatened, by the treatment recommended, brings it under the notice of the profession.]

The symptoms being those of acute catarrh of the nasal mucous membrane, the treatment which seemed to me most likely to succeed was that which I have always found most efficacious in acute catarrh of the gastric mucous membranes. In the acute catarrh of alcoholism accompanied with profuse secretion of mucus, which is often vomited up in large quantities almost without effort, as well as in the more chronic forms of gastric catarrh, bismuth alone, or in combination with morphia, acts almost like a specific.

On the same principle the topical application of bismuth to the nasal mucous membrane seemed to me the plan most likely to be followed by beneficial results. I do not know whether the plan is absolutely original, but I am not aware of its having been adopted previously. This, however, is of no importance compared with the question of its efficacy. On the evening in question I began to suffer with the symptoms of cold in the head—irritation of the nostrils, sneezing, watering of the eyes, and commencing flow of the mucous secretion. Having some trisnitrate of bismuth at hand, I took repeated pinches of it in the form of snuff, inhaling it strongly, so as to carry it well into the interior of the nostrils. In a short time the tickling in the nostrils and sneezing ceased, next morning all traces of coryza had completely disappeared.

Bismuth alone, therefore, proved quite successful, but it is better in combination with the ingredients in the following formula. Bismuth by itself is rather heavy, and not easily inhaled, and it is, moreover, necessary that it should form a coating on the mucous membrane. It is, therefore, advisable to combine it with pulv. acaciæ, which renders the bulk larger and the powder more easily inhaled, while the secretion of the nostrils causes the formation of an adherent mucilaginous coating, of itself a great sedative of an irritated surface. The sedative effect is greatly strengthened by the addition of a small quantity of hydrochlorate of morphia, which speedily allays the feeling of irritation, and aids in putting a stop to the reflex secretion of tears.

The formula which I find on the whole the most suitable combination of ingredients of the snuff is as follows:—Hydrochlorate of morphia, two grains; acacia powder, two drachms; trisnitrate of bismuth, six drachms. As this is neither an errhine nor a sternutatory, but rather the opposite, it may be termed an anti-errine or anti-sternutatory powder. Of this powder one-quarter to one-half may be taken as snuff in the course of the twenty-four hours. The inhalations ought to be commenced as soon as the symptoms of coryza begin to show themselves, and should be used frequently at first, so as to keep the interior of the nostrils constantly well coated. Each time the nostrils are cleared another pinch should be taken. It may be taken in the ordinary manner from between the thumb and fore-finger, but a much more efficacious and less wasteful method is to use a small gutter of paper, or a "snuff-spoon," placing it just within the nostril, and sniffing up forcibly so as to carry it well within. Some of the snuff usually finds its way into the pharynx, and acts as a good topical application there, should there be also pharyngeal catarrh. The powder causes scarcely any perceptible sensation. A slight smarting may occur if the mucous membrane is much irritated and inflamed, but it rapidly disappears. After a few sniffs of the powder, a perceptible amelioration of the symptoms ensues, and in the course of a few hours, the powder being inhaled from time to time, all the symptoms may have entirely disappeared.

I am writing this note cured of a cold in the head which I began to manifest in a very decided manner last night—viz., weight in the frontal sinuses, tickling of the nostrils, sneezing, watering of the eyes, and commencing flow of the nasal mucus.

I commenced taking the snuff, continuing at intervals for about two hours, thoroughly coating the interior of the nostrils with it. Next morning I found myself entirely free from catarrh. The effects in my own case have been twice so rapid and beneficial that I look with comparative indifference on future colds. In the case of others to whom I have recommended the same treatment equally rapid and beneficial results have followed. One of my students in King's College Hospital described the effects as quite magical and unexpected, having in this way got rid of a cold in one evening. The other day one of the officials in King's College asked me if I could do anything to check a dreadful cold in the head which he had just caught. I gave him the above prescription, asking him to note the results. A day or two after he came and told me that I had given him very marvellous snuff, as he had not taken more than one-eighth part before he had got rid of all his uneasiness and discomfort. Though I have not yet had very many opportunities of trying this method of cure, the success so far has been such as to warrant my recommending it as a rapid and efficacious treatment of nasal catarrh.—*Lancet, April* 8, 1876.

[We should prefer to use this remedy without the morphia....Eds.]

GALLIC ACID IN THE TREATMENT OF ALBUMINURIA.

By Dr. J. T. Jamieson.

The following is from an article in the *American Practitioner*:—I wish to call attention to the use of gallic acid in the treatment of albuminuria as a sequel to scarlet fever, with which, in a few cases, I have met with marked success. My experience with the remedy has been as follows:—

In my first case, occurring in a boy aged about

twelve years, the symptoms were very severe. There was œdema of the face and lower extremities, but no effusion into the thoracic or abdominal cavities; violent headache; blindness; there had been four or five strong epileptiform convulsions; urine was scanty and contained blood, resembling exactly water in which fresh beef had been washed, and coagulating about one-half on testing with heat and nitric acid. To relieve the cerebral symptoms, a blister was applied to the neck, sinapisms to the extremities and lumbar region, cold to the head, and two or three doses of a mercurial with bitartrate of potassa. This was followed by iodide of potassium and a teaspoonful of a saturated solution of gallic acid every two hours. The acid was given in this manner for five days and nights in succession, the patient rapidly improving under its use, and the urine becoming more copious and less bloody. It was continued for twenty-two days, only at longer intervals, and at that date the urine when tested manifested the slightest possible trace of albumen, although the boy at this time was around the house and apparently perfectly recovered, having been so for a number of days. The tinct. ferri. chloridi was given in small doses, and completed the cure.

My second case occurred in a girl about six years of age. The eruption was very livid and the skin had desquamated. The child recovered well from the fever, and was about the house. She went into a cold room to play with other children, and a day or two after the face became œdematous; there was pain in the head; slight fever; urine quite bloody, and on testing in the usual manner presented considerable coagulation. The patient was put upon a saturated solution of gallic acid, a teaspoonful every two hours. In seven days the urine was free from albumen and copious in quantity, and the child seemed well, with the exception of debility, for which the muriated tincture of iron was prescribed. About ten days after this, in consequence of fresh exposure to cold, there was a slight relapse, the urine becoming again bloody and the face puffed; but on resuming the gallic acid for a few days these symptoms speedily subsided and the recovery became permanent. In this case the gallic acid was administered unaccompanied by any other medicine, except an occasional dose of castor oil to regulate the action of the bowels.

Remarks.—The treatment hitherto generally adopted in this affection has been that of acting derivatively on the bowels by means of mercurials, followed by such diuretics as digitalis, sweet spirits of nitre, acetate of potash, &c; but if future experience should confirm the efficiency of gallic acid, I cannot but think we shall possess a remedy superior to any of the above. The gallic acid if I understand its action aright, enters the blood unchanged, and unchanged is carried directly to the congested and inflamed capillaries of the secernent portion of the kidneys, acting as an astringent and tonic upon them, promoting their contraction, and thus arresting the exudation of red blood corpuscles and promoting the normal secretion of urine. I have seen no unpleasant effects from its administration as freely as above represented. It does not disturb the stomach nor interfere with the appetite or digestion, but it does tend to constipate the bowels somewhat, rendering necessary the occasional use of a relaxative.—*Medical Press and Circular.*

HOT WATER ENEMATA IN DYSENTERY.

In the New York *Medical Journal*, Dec., 1876, Dr. J. J. Reid recommends hot water injections in acute dysentery.

The method of administration is quite simple, and does not require the services of a skilled nurse, or extensive apparatus.

The hips of the patient are slightly raised, by means of a pillow, and a basin of water of the requisite temperature is placed in the bed, so as to allow the nates to rest on the edge of the vessel. The vaginal nozzle of a Davidson's syringe is then introduced into the rectum, and alongside of it the rectal or smaller nozzle. A current of water is then kept up for ten minutes, the water passing through the vaginal nozzle into the rectum, and returning by a steady stream through the smaller one into the basin, without causing any inconvenience to the patient. If the disease is extensive, and the colon involved for a considerable distance, a long rectal pipe may be employed instead of the vaginal nozzle.

The immediate effect on the patient is one of comfort, which lasts for about an hour.

The injections are to be continued every two hours, till the active stage of the disease is past.

STRETCHING OF NERVES IN THE TREATMENT OF CENTRAL NERVE-LESIONS.

(V. Nussbaum: *Centralblatt für Chirurgie*, 1876, No. 39).—As a proof that this mode of treatment can be used with good effect, not only when the affection is peripheral but also when it is central, Nussbaum reports the following case: The patient, a man aged 35 years, fell from a height, eleven years previously, and, as a result, suffered complete paralysis of the lower extremities and the sphincters and intense chronic cramps of the legs. After the failure of other methods for the relief of these cramps, the crural and ischiatic nerves of the right side were exposed by incisions and drawn out with the bent finger, and strong traction made upon them. The chronic contraction upon the right side immediately ceased. The operation and the after-treatment were performed according to the method of Leslie, and both wounds were entirely healed at the end of two weeks. The same operations, with the same results, were then performed upon the left side. After the disappearance of the chronic cramps, the patient, who had previously been bed-ridden, was able, by the aid of supports and crutches, to move himself about.

THE CANADA MEDICAL RECORD

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FRANCIS W. CAMPBELL, M.A., M.D. L.R.C.P., LOND.

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TO OUR SUBSCRIBERS.

We enclosed in our last issue accounts to all who were indebted to us, up to the end of volume four. We regret that so many have totally disregarded the appeal which their presence was intended to convey. As this is the time of the year when physicians are more than usually in funds, we again respectfully ask that our subscribers will remember the *Record*, and at once remit us the amounts indicated by their accounts.

THE NEW MEDICAL BILL.

We publish below the full and correct text of the New Medical Bill which passed the Quebec Legislature at its last session. We specially direct the attention of our subscribers in the Province of Quebec to it, as there are several very important sections to which it is desirable they should direct their attention.

An act to amend and consolidate the acts relating to the profession of medicine and surgery in the Province of Quebec.

WHEREAS, the laws now in force in the Province of Quebec, for regulating the qualifications and examination of candidates for the study of medicine, surgery and midwifery, for the registration of medical practitioners, and for the infliction of penalties upon persons infringing the provisions of the Medical Act, respecting the practice of medicine, surgery and midwifery, require amendment; Therefore, Her Majesty, by and with the advice and consent of the Legislature of Quebec, enacts as follows:

1. From and after the passing of this act, the act or ordinance of the legislative council of the late Province of Quebec, passed in the twenty-eighth year of the reign of His late Majesty King George the Third, and intituled: *An act or ordinance to prevent persons practising physic and surgery within the Province of Quebec, or midwifery within the towns of Quebec and Montreal, without license*, and all other acts or part of acts in any manner relating to the practice of medicine, surgery or midwifery in the Province of Quebec, or in any manner relating to the mode of obtaining licenses to practice medicine, surgery or midwifery therein, shall be and are hereby repealed, except in so far as relates to any offence committed against the same or any of them before the passing of this act or any penalty or forfeiture incurred by reason of such offence.

2. All persons resident in the Province of Quebec and licensed to practice medicine, surgery or midwifery therein at the time of the passing of the present act, and all persons who may hereafter obtain a license to practice medicine, surgery, and midwifery in this province, shall be and are hereby constituted a body politic and corporate by the name of *The college of physicians and surgeons of the Province of Quebec*, and shall by that name have perpetual succession and a common seal, with power to change, alter, break or make new the same; and they and their successors by the name aforesaid may sue and be sued, implead and be impleaded, answer and be answered unto in all courts and places whatsoever, and by the name aforesaid shall be able and capable in law to have, hold, receive, enjoy, possess and retain for the ends and purposes of this act and for the benefit of the said college, all such sums of money as have been or shall at any time hereafter be paid, given or bequeathed to and for the use of the said college; and by the name aforesaid shall and may at any time hereafter, without any letters of mortmain, purchase, take, receive, have, hold, possess and enjoy any lands, tenements or hereditaments or any estate or interest derived or arising out of any lands, tenements or hereditaments for the purposes of the said college and for no other purposes whatever; and may sell, grant, lease, demise, alien or dispose of the same, and do or execute all and singular the matters and things that to them shall or may appertain to do; provided always that the real estate so held by the said corporation shall at no time exceed in value the sum of $20,000.

3. From and after the passing of this act, the persons who compose the college of physicians and surgeons shall be styled "Members of the college of physicians and surgeons of the Province of Quebec."

4. The affairs of the said college shall be conducted by a board of governors, forty in number and elected for three years; fifteen of whom shall be elected from among the members of the college, resident in the district of Quebec; nineteen from among its members resident in the district of Montreal; three from among its members resident in the district of Three-Rivers; and three from among its members resident in the district of St. Francis; and of the said board of governors neither more nor less than eight shall be resident in the city of Quebec; and neither more nor less than eight in the city of Montreal; provided always that not less than two members out of the city members shall be delegates from each of the Universities, Colleges and incorporated medical schools now existing in the Province of Quebec, to wit: The University of Laval, the University of McGill, the University of Bishop's College, and the incorporated school of medicine and surgery of Montreal affiliated with the University of Victoria College or with any other British University; and at each elec-

tion of the board of governors, every member of the said corporation shall have the right of voting by proxy.

2. Of the aforesaid districts, the district of Quebec shall comprise the present judicial district of Quebec, Gaspé, Saguénay, Chicoutimi, Rimouski, Montmagny, Beauce, and Kamouraska; the district of Montreal shall comprise the present judicial districts of Montreal, Terrebonne, Joliette, Richelieu, Bedford, St. Hyacinthe, Iberville, Beauharnois and Ottawa; the district of Three Rivers shall comprise the present judicial districts of Three-Rivers, and Arthabaska, and the district of St. Francis shall consist of the present judicial district of St. Francis.

3. The members of the Board of Governors shall be elected for a period of three years, but any member may resign his appointment at any time by letter addressed to the secretary of the said board, and upon the death or resignation of any member of the said board it shall be the duty of the secretary forthwith to notify the university or body wherein such vacancy may occur, of such death, resignation or removal, and such university or body shall have the power to nominate another duly qualified person to fill such vacancy, or if the vacancy be caused by the death, resignation or removal from the electoral city or district, of any member elected from the electoral cities or districts, the Board of Governors shall fill up such vacancy from amongst the eligible members of the college in the city or district where such vacancy shall have occurred, by an election by ballot at the next ensuing meeting subsequent to the occurrence of such vacancy, and it shall be lawful for the Board of Governors to exercise during such vacancy the powers of the board hereinafter mentioned.

5. The said board of governors shall be, and are hereby constituted "The provincial medical board," in which capacity they shall meet to perform the several duties devolving upon them under this act as the board of governors of the college, not less than twice in each year, at such time and place as by them shall be deemed most fit, and on which occasions seven shall be a quorum, for the transaction of business.

6. From and after the passing of this act, no person shall practice medicine, or surgery, or midwifery, in the Province of Quebec, unless he shall have obtained a license from the provincial medical board who are hereby authorized to issue such license.

7. Every person who has obtained or may hereafter obtain a medical degree or diploma in any university or college mentioned in section IV of this act, shall be entitled to such license without examination as to his qualifications; provided always that the provincial medical board shall have the power and option of extending the same privilege to the holders of medical degrees and diplomas of other British or Colonial Universities and Colleges.

8. From and after the passing of this act, no person shall be admitted as a student of medicine, surgery, or midwifery, unless he shall have obtained a certificate of qualification from the Provincial Medical Board, and no one shall be entitled to the license of the college on presentation of a diploma unless he has been previously admitted to the study of medicine, in accordance with the provisions of this act, or unless he has passed an equivalent preliminary examination before an authorised college or licensing board in Her Majesty's Dominions, acceptable to the board created by this act.

9. At the first regular meeting of said board after the passing of this act, there shall be appointed by the provincial medical board for three years [subject to the continued approval of the board] four persons actually engaged in the work of general education in the province of Quebec, to examine all persons about to begin the study of medicine, surgery and midwifery, on the subjects of general education hereinafter mentioned as belonging to the preliminary qualification of medical students, viz.: one examiner skilled in the French language and one skilled in the English language for the city of Montreal, and one skilled in the French language and one skilled in the English language for the city of Quebec. The subjects of the preliminary qualification to be English and French, latin, geography, history, arithmetic, algebra, geometry, *belles lettres*, and any one of the following subjects: Greek, natural and moral philosophy; and the candidate to present a certificate of good moral character; provided that all medical students who before the passing of this act shall have passed their preliminary examination before the examiner or examiners of any university, or incorporated school, or provincial medical board, shall not be required to pass before the examiners mentioned in this section.

10. Every person wishing to obtain a license to practice medicine, surgery and midwifery in this province, and to be registered under this act, and who shall not have obtained a degree or diploma in medicine, surgery and midwifery from any of the institutions mentioned in clause 4 of this act, shall, before being entitled to such license and to registration in this province, pass an examination as to his knowledge and skill for the efficient practice of medicine, surgery and midwifery before this board; and upon passing the examination required and proving to the satisfaction of the examiners that he has complied with the rules and regulations made by the provincial board, and on payment of such fees as the board may by general by-law establish, such person shall be entitled to a license to practice medicine, surgery and midwifery in the province of Quebec.

11. The said board of governors of the college of physicians and surgeons shall have power:—

1. To regulate the study of medicine, surgery and midwifery by making rules with regard to the preliminary qualification, duration of study, curriculum to be followed, and the age of the candidate applying for a license to practice; provided always that such rules shall not be contrary to the provisions of this act.

2. To examine all credentials purporting to entitle

the bearer to a license to practice, and all degrees or qualifications sought to be registered in this province, and to oblige the bearer of such credentials, degrees or qualifications to attest on oath, (to be administered by the chairman for the time being,) that he is the person whose name is mentioned therein, and that he became possessed thereof legally.

3. To cause every member of the profession now practising, or who may hereafter practise in the Province of Quebec, to enregister his name, age, place of residence, nativity, the date of his license and the place where he obtained it, in the books of the College.

4. To fix the period of probation which persons must undergo before being eligible for election as governors of the college, which period shall not be less than four years, and to make all such rules and regulations for the government and proper working of the said corporation and the election of a president and officers thereof, as to the board of governors may seem meet and expedient, which said rules and regulations shall, before they shall come into effect, be sanctioned by the lieutenant-governor in council of this province after the same shall have been submitted to him for approval and by him allowed.

12. The "provincial medical board":

1. Shall from time to time, as occasion may require, make rules and regulations for the guidance of the "examiners," and may prescribe the subjects and mode of the examinations, the time and place of holding the same, and generally may make all such rules and regulations in respect to such examinations not contrary to the provisions of this act, as they may deem expedient and necessary.

2. It shall regulate the study of medicine, surgery and widwifery by making rules with regard to the preliminary qualifications, duration of study, curriculum of studies to be followed by the students.

Provided always that such rules shall not be contrary to the provisions of this act, and that any change in the curriculum of studies fixed by the board shall not come into effect until one year after such change is made.

3. It shall have power to make tariffs of rates to be charged in towns and country for medical, obstetrical or surgical advice, or for attendance—or for the performance of any operation, or for any medicines which shall have been prescribed or supplied.

4. It shall appoint assessors either out of its own body or from among the registered members of the college to visit and attend the medical examinations of the various universities, colleges, and incorporated schools of the province, and to report to the provincial board upon the character of such examinations; but such assessors shall not be chosen out of any one of the teachers in any one of the said universities or incorporated schools, and should such report be at any time unfavorable, to any university, college or incorporated school, the provincial board shall in such case and under such circumstances have the power to refuse the registration of the degree or diploma of the institution so reported upon, until such examination shall have been amended. For such purpose the provincial board shall appoint or elect assessors, two or more of whom shall attend the examinations at each university, college or incorporated medical school.

5. It shall be the duty of the above institutions to notify the provincial board of the time or times at which their examinations shall be held, at least one month previous to such examinations.

13. The provincial medical board shall have the power to fix by by-law the salary or fees to be paid to the officers, and to the examiners and visitors appointed by the said board; as well, also, the fees to be paid by all candidates entering on the study of medicine, as also by all candidates for the license to practice medicine, surgery, and midwifery, as well as the fee to be paid for registration; and the said board may dispose of all fees received in whatever manner they may think most conducive to the interests of the college.

14. The qualifications to be required from a candidate for examination to obtain a licence to practise shall consist in his not being less than twenty-one years of age; that he has followed his studies uninterruptedly during a period of not less than four years, commencing from the date of his admission to the study of medicine by this board, and that during the said four years he shall have attended at some university, college or incorporated school of medicine, within Her Majesty's dominions, not less than two six months' courses of general or descriptive anatomy,—of practical anatomy—of surgery—of practice of medicine—of midwifery—of chemistry—of *materia medica* and general therapeutics—of the institutes of medicine or physiology and general pathology,—of clinical medicine and of clinical surgery,—one six months' course or two three months' courses of medical jurisprudence,—and one three months' course of botany,—one three months' course of hygiene—and a course of not less than twenty-five demonstrations upon microscopic anatomy, physiology and pathology; also, that he shall have attended the general practice of an hospital in which are contained not less than fifty beds, under the charge of not less than two physicians or surgeons, for a period of not less than one year and a half, or three periods of not less than six months each; and that he shall also have attended six cases of labor, and compounded medicine for six months; and to remove all doubts with regard to the number of lectures which the incorporated schools of medicine of the Province of Quebec are bound to give: be it enacted and declared, that each six months' course shall consist of one hundred and twenty lectures, except in the case of clinical medicine, clinical surgery, and medical jurisprudence; of the four years' study required by this act, three six months' sessions at least shall be passed in attendance upon lectures at a university, college or incorporated school of medicine recognized by this board; the first whereof shall be so passed the year immediately succeeding the preliminary examinations.

15. All persons obtaining the license to practice from the college of physicians and surgeons of the Province of Quebec, shall be styled members of the college, but shall not be eligible as governor within a period of four years from the date of their admission as members; and the said election of governors shall be made under such rules and regulations therefor, and in such a manner as the said board of governors shall ordain; the members of the college shall pay the sum of two dollars a year for the use of the college.

16. The provincial medical board shall have the power to make rules and regulations respecting the admission of females to the practice of midwifery in this province.

17. The provincial medical board shall cause to be kept by the registrar, a book, or register, to be called the register, in which shall be entered, from time to time, the names of all persons who have complied with the enactments hereinafter contained, and with the rules or regulations made or to be made by the provincial medical board respecting the qualifications to be required from practitioners of medicine, surgery and midwifery in the Province of Quebec; and those persons only whose names have been or shall hereafter be inscribed in the register above mentioned, shall be deemed to be qualified and licensed to practice medicine, surgery, and midwifery in the Province of Quebec; and such register shall at all times be open and subject to inspection by any duly registered practitioner in the province, or by any other person.

18. It shall be the duty of the registrar to keep the register correct in accordance with the provisions of this act and the orders and regulations of the provincial medical board, and he shall from time to time make the necessary alterations in the addresses, or qualifications of the persons registered under this act; and the said registrar shall perform such other duties as shall be imposed upon him by the provincial medical board.

19. If the registrar be convinced of a felony he shall be disqualified from again holding any office in the college.

20. Every member of the medical profession who, at the time of the passing of this act, may be possessed of a license from the college of physicians and surgeons of Lower Canada to practice medicine surgery and midwifery in the Province of Quebec shall, on the payment of the fee of one dollar, be entitled to be registered on producing to the registrar the document conferring or evidencing the qualification, or each of the qualifications in respect whereof he seeks to be so registered, or upon transmitting by post to such registrar, information of his name and address, and evidence of the qualifications in respect whereof he seeks to be registered and of the time or times at which the same was or were respectively obtained, provided he register within one year after the passing of this act.

21. Any person entitled to be registered under this act, but who shall neglect or omit to be so registered, shall not be entitled to any of the rights or privileges conferred by this act so long as such neglect or omission continues, and he shall be liable to all the penalties imposed by this act, or by any other act which may now be in force against unqualified or unregistered practitioners, and he shall pay a fine of five dollars every year until he is registered.

22. No person shall be entitled to recover any charge in any court of law for any medical or surgical advice, or for attendance, or for the performance of any operation, or for any medicine which he shall have prescribed or supplied, nor be entitled to any of the rights or privileges conferred by this act, unless he shall prove that he is registered under this act and has paid his annual contribution to the college.

23. No certificate required by any act now in force or that may hereafter be passed in this province from any physician or surgeon or medical practitioner, shall be valid unless the person signing the same be registered under this act.

24. Any registered member of the medical profession who shall have been convicted of any felony in any court shall thereby forfeit his right to registration, and, by the direction of the provincial medical board, his name shall be erased from the register; or in case a person, known to have been convicted of felony, shall present himself for registration, the registrar shall have power to refuse such registration.

25. Any person not entitled to be registered in this province, who shall be convicted upon the oath of one or more witnesses in accordance with the provisions of 38 Vict. chap. 25 of this province, of having practised medicine, surgery or midwifery in the Province of Quebec, for hire, gain, or hope of reward shall, upon summary conviction before a sheriff, or district magistrate or recorder, or judge of the sessions of the peace, be condemned to pay a fine of not less than $25, nor exceeding $100.

2. A like penalty shall be incurred by every person assuming the title of doctor, physician, or surgeon, or any other name implying that he or she is legally authorized to practice medicine, surgery or midwifery, in this province, if unable to establish the fact by legal proof, and every person who by advertisement in any newspaper or by printed or written circulars, or by card, or by sign board assumes any addition, name or description implying or calculated to lead persons to infer that he or she is a duly registered or qualified practitioner of medicine, surgery, and midwifery or any one of them, or any person offering or giving his or her services as physician, surgeon or midwife, if not duly licensed and registered in this province, shall in each such case be liable to be condemned to a like penalty.

3. In every prosecutions under this act, the proof of registration shall be incumbent upon the prosecuted.

4. All prosecutions under this act, shall take place before any sheriff, district magistrate, or recorder, or judge of special sessions of the peace having jurisdiction in the locality where the offence was committed, and such sheriff, district magistrate,

or recorder or judge of special sessions of the peace, besides the fine above mentioned, shall have power to condemn in costs; and, in the event of the costs or the fine not being paid, to order an imprisonment for a term not exceeding thirty days, unless the fine and costs be sooner paid.

26. The penalties imposed by this act shall be recoverable with costs, and the same may be sued for, and recovered by the said college of physicians and surgeons of the Province of Quebec by its corporate name, and being recovered shall belong to the said corporation for the use thereof.

And neither in any such suit or in any other civil action to or in which the said corporation may be a party or interested, shall any member of the corporation be deemed incompetent as a witness by reason of his being such member;

2. All penalties recoverable under this act, shall be paid over to the court convicting, and by the latter, to the treasurer of the provincial medical board. The provincial medical board may authorize any person to prosecute in his own name, any person for any infringement of this act, and the provincial medical board shall have power to allow the prosecutor the whole or a portion of the penalties recovered.

27. In all cases where proof of registration under this act is required, the production of a printed or other copy of the register, certified under the hand of the registrar of the college of physicians and surgeons of the Province of Quebec, for the time being, shall be sufficient evidence that all persons therein named are registered practitioners, in lieu of the production of the original register; and any certificate upon such printed or other copy of the register, purporting to be signed by any person in his capacity of registrar of the college under this act, shall be *prima facie* evidence that such person is such registrar, without any proof of his signature, or of his being in fact such registrar.

28. The present board of governors elected under the provisions of the acts therein before repealed shall be continued and shall act until after the next triennial election, but subject in all other respects to the provisions of this act; and all by-laws, rules and regulations heretofore made by the said college of physicians and surgeons of Lower Canada shall remain in force until repealed or modified under the provisions of this act.

29. The officers appointed under the provisions of the acts repealed, shall retain their respective offices, and perform their respective duties under the provisions of this act, and all books and registers heretofore kept by them in conformity with the acts hereby repealed, shall be continued in use for their respective purposes under this act.

31. The college of physicians and surgeons of the Province of Quebec is hereby vested with all the rights, powers, privileges, property and assets, heretofore belonging to the college of physicians and surgeons of Lower Canada.

32. Nothing in this act contained shall be construed to affect the rights of any persons under the provisions of the act 28 Vict. cap 59 and amendments thereto, 29 Vict. chap. 95.

Our sanitary condition, as regards small-pox, would seem to attract the notice of the profession in Great Britain, as the following, from Dr. Barnes, of London—the very eminent physician and practical writer—shows. We believe a friend of Dr. Barnes sent him a copy of the *Star*, (Montreal,) containing a report of a lecture by Dr. Coderre, whereupon Dr. Barnes wrote to Dr. Ballard, the following letter:—

31 Grosvenor Street,
Grosvenor Square, W.
December 21, 1876.

DEAR BALLARD,—You may know that there is a fanatic opposition to vaccination, in Montreal, chiefly backed by *some* French Canadian doctors; one of these, amongst other statements, quotes you as publishing that, "from January 1st, 1872, to August, 1874, 1074 children had died of syphilis after being vaccinated, and that thousands of these had their blood contaminated." This doctor's name is Coderre; his statement made in a public lecture. The Mayor of Montreal is Dr. Hingston, a man of excellent position and unusual ability. He is charged with the defence of vaccination.

It may not be amiss to say that Montreal is ravaged by small-pox, and that it is kept up and spread in the French-Canadian quarters. The bigotry and ignorance of the masses is something mediæval. I shall be glad to forward to Dr. Hingston anything you may have on the matter.

* * * * *

Yours, with all good wishes,
ROBERT BARNES.

When Dr. Ballard received the above, he at once wrote to Dr. Hingston, the following:

12 Highbury Terrace,
London.
December 27, 1876.

DEAR DR. HINGSTON,—I received a note from our friend Dr. Barnes—it is my apology for troubling you with this letter.

I need not, I am sure, tell you that I never published such a statement as that attributed to me by the person named in Dr. Barnes' note. Its absurdity would, one would think, render my repudiation unnecessary. Since 1868, when my essay on vaccination was published, I have written nothing upon the subject of vaccinal syphilis. I may add that, although the subject is one which has, since that date, occupied a good deal of my attention, I have seen no reason to modify in any essential respect, the conclusions I had arrived at previously, and had published in my essay.

As it is possible you may not have seen my essay, I have ventured to send a copy of it for your kind acceptance. I hope it will arrive safely.

Believe me to be,
Dear Dr. Hingston,
Yours very faithfully,
EDWARD BALLARD.

The thanks of the profession here are certainly due to Dr. Barnes, for promptly drawing Dr. Ballard's attention to the statement in question, and to Dr. Ballard's equally prompt refutation. It will make no difference, however, for Dr. Coderre will, doubtless, still follow his mischievous course, unconvinced and unconvinceable.

THE LATE DR. E. K. PATTON, OF MONTREAL.

The late Dr. E. K. Patton, of Montreal, who died on the 3rd of January, was eldest son of R.G. Patton, Esq., formerly assistant postmaster of Quebec, and was born in that city in 1845. He received a liberal education, first at the classical school of Mr. Brown, then at the Quebec High School, and, finally, he attended the Quebec Seminary for five years. After spending two years in the medical department of Laval University, he completed his course at McGill, and graduated in 1867. Being full of zeal and love for his profession, he would not consent to begin practice until he had gained experience in the hospitals of London. After spending six months in St. Thomas' Hospital, he was recommended by its authorities for the post of assistant physician to the distinguished surgeon Mr. Hochee, of Finchley. He enjoyed very great privileges and opportunities of extending his medical experience in Mr. Hochee's large practice. After remaining one year with Mr. Hochee, he returned to London, and passed his examination for the membership of the Royal College of Surgeons and a licentiate of the Society of Apothecaries. Shortly afterwards he was selected from among a large number of applicants, to be the medical superintendent of Munster House Asylum, and also house surgeon of Sheffield Infirmary. In the latter place he acquired much experience and skill in surgery. Desirous of more experience in a new field, he made two trips to the West Coast of Africa, as physician on one of the regular line of steamers. He then returned home to see his friends, before settling in one of the county towns of England, where bright prospects were before him. The strong love of friends influenced him to change his purpose, and shortly afterwards he settled in Montreal, and began at the very bottom of the ladder to earn for himself a name and a practice in the city where he had graduated. Unassisted by influential friends, having no one to introduce him, he found it slow, very slow, climbing for two or three years. Sometimes he was almost discouraged, when he contrasted his life in Montreal with his success and prospects in England. He knew his acquirements, but he did not parade them before the public. He possessed a genial nature and a kind heart. He was modest and gentlemanly in his deportment and successful in practice. Five years were sufficient to give him a good standing as one of the rising physicians of Montreal, to secure him many kind friends with whom he was a great favorite, and to afford him the satisfaction of knowing that his ability was being recognised and appreciated. Dr. Patton was one of the attending physicians to the Montreal Dispensary, and was a member the Medico-Chirurgical Society of Montreal. His death was somewhat sudden. He had been out spending the evening on the 27th of December, and on the night of the 28th was seized with a severe rigor. On the 29th he was seen by his friend Dr. Bell, whose diagnosis of the case was doubtful; on the 30th the diagnosis became clear—pleura pneumonia (double)—and the disease rapidly progressed in spite of treatment, and, early on the forenoon of the 3rd of January, he breathed his last. The record of the temperature, as furnished by Dr. Bell, is somewhat remarkable, especially toward the termination of the scene. On the morning of the day he died, at 7 a.m., it stood at 105; 9 a.m., 106; 10 a.m., 106.3; 11 a.m., 107.5; 11.30, 109.2; and at a little before 12 he died. His funeral, which took place on the 6th of January, was largely attended—the Freemasons and Odd Fellows, of which organizations he was a member, turned out in large force.

Studies—chiefly Clinical, in the Non-Emetic Use of Ipecacuanha, with a Contribution to the Therapeutics of Cholera. By ALFRED WOODHULL, M.D., assistant surgeon U. S. Army. Philadelphia: J. P. Lippincott, 1876. Montreal: Dawson Brothers.

Of late years the profession have become

aware of other virtues in ipecacuanha than forming an ingredient of almost every cough mixture, and being used as an emetic. However, no matter how much may have been known as to the therapeutical value of this drug, a very great deal of information, and much of it of a very practical character, can be learned from this unpretending little volume of about one hundred and fifty pages, the name of which heads this brief notice. The author claims ipecacuanha is a direct nerve stimulant, acting chiefly, if not entirely, upon the sympathetic system. This he attempts to prove by facts, chiefly clinical, and we think many of the cases which he reports strongly corroborate his assumption.

ELIXIR FERRI ET CALCIS PHOSPHATIS CO.

This is a very elegant, agreeable and valuable preparation, which is manufactured by Dr. Wheeler, of Montreal, and concerning which we can speak from actual experience. We have prescribed it for several years past, and have found it to answer our expectations to the fullest degree. We direct our readers to an advertisement concerning it, which will be found on the back page of the *Record.*

SMOKING BELLADONNA IN ASTHMA.

Dr. Reeves states, in the *Melbourne Med. Record* that smoke derived from the leaves of belladonna possesses much more power in cutting short an attack of asthma than that from stramonium. A long pipe is the best means of smoking them, the patient being instructed to draw the smoke deep into the chest. If, when the attack is at its height, he has not the power of doing this, the leaves may be placed in a saucer containing lighted charcoal or wood-ashes, which should be be placed on a chair in front of the patient—this chair, as well as his own, being covered with a large sheet, so as to confine the fumes before the leaves are put on the hot charcoal. From two and a half to five grains of the leaves are sufficient when smoked, and from five to twenty grains when burned. If the smoke is drawn deeply into the chest, the relief is immediate, expectoration of phlegm taking place. It is in the spasmodic form of asthma, where there is little or no expectoration, that the greatest relief is obtained, for, when the tubes are loaded with mucus, the smoke cannot get access to their muscular tissue. The relief is most marked when the remedy is used after the paroxysm has commenced, before the spasm prevents access of air to the smaller tubes and air-cells. Tobacco-smokers do not receive the same amount of relief as others. Temporary headache of a throbbing character may be produced if the leaves are used too freely.

TO DESTROY WARTS.

A medical exchange states that a drachm of nitrate of silver dissolved in an ounce of nitro-muriatic acid makes a solution which, applied to warts with a fine brush, will permanently cure them in four days.

We may add that we know of nothing better to remove warts than the leaves of a common bean. Crush the leaves between the fingers, and squeeze outt he juice upon the warts two or three times a day, until they dry up and disappear. The cure will generally be complete in less than a week.

"UNION IS STRENGTH."

A good story is told of Dr. Radcliffe, to the effect that once, when attending an intimate friend during a dangerous illness, he declared (actuated by a generous feeling) that he would receive no fee. But when cure was complete, and the physician was taking his leave, "I have put every day's fee," said the patient, "in this purse, my dear doctor; nor must your goodness get the better of my gratitude." The doctor eyed the purse, counted the days of his attendance in a moment, and then, extending his hand by a kind of professional mechanical motion, replied, "Well, I can hold out no longer; single, I could have refused the guineas; but all together, they are irresistible!"

CHLORAL OINTMENT.—An ointment, useful in eczema and allied affections, is made by incorporating from thirty to sixty grains of chloral hydrate with one ounce of simple ointment.

BIRTHS.

In Toronto, on the 7th December, 1876, the wife of Dr. H. E. Buchan, of a daughter.

In this city, on the 15th instant, the wife of William H. Hingston, M.D., of a son.

DIED.

In Montreal, on the 3rd of January, after a few days' illness, Edward K. Patton, M.D., aged 32 years.