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CANADA LANCET.

WILLIAM EDWARD BOWMAN, M.D., EDITOR.

WHOLE No., 15. MONTREAL, MAY 15, 1864. SECOND YEAR.

TRICHINA SPIRALIS.

BY W. KELLER OF DARMSTADT.

A few months ago there was a festive celebration at Hettstädt, a small country town near the Hartz Mountains, in Germany. Upwards of a hundred persons sat down to an excellent dinner, and having enjoyed themselves *more majorum*, separated and went to their homes.

Of these hundred and three persons, mostly men in the prime of life, eighty-three are now in their graves; the majority of the twenty survivors linger with a fearful malady; and a few, only, walk apparently unscathed among the living, but in hourly fear of an outbreak of the disease which has carried away such numbers of their fellow-diners.

They had all eaten of a poison at that festive board, the virulence of which far surpasses the reported effects of *aqua tophana*, or of the more tangible agents described in toxicological text-books. It was not a poison either dug out of the earth, extracted from plants, or prepared in the laboratory of the chemist. It was not a poison administered by design or negligence. It was a poison unknown to all concerned; and was eaten with the meat in which it was contained, and of which it formed a *living* constituent.

When the festival at Hettstädt had been determined upon, and the dinner had been ordered at the hotel, the keeper of the tavern arranged his bill of fare. The introduction of the third course, it was settled, should consist, as usual in those parts of the country, of *Rostwurst und Gemuse*. The *Rostwurst* was therefore ordered at the butcher's, the necessary number of days beforehand, in order to allow of its being properly smoked. The butcher, on his part, went expressly to a neighboring proprietor, and bought one of two pigs from the steward, who had been commissioned with the transaction by his master. It appears, however, that the steward, unfortunately, sold the pig which the master had not intended to sell, as he did not deem it sufficiently fat, or well-conditioned. Thus the wrong pig was sold, carried on a barrow to the butcher, killed and worked up into sausages. The sausages were duly smoked and delivered at the hotel. There they were fried and served to the guests at the dinner-table.

On the day after the festival, several persons who had participated in the dinner suffered from irritation of the intestines, loss of appetite, great prostration, and fever. The number of persons attacked rapidly increased; and great alarm was excited in the first instance, by the apprehension of an impending epidemic of typhus, or continued fever, with which the symptoms observed showed great similarity.

But when, in some of the cases treated by the same physician, the features of the illness began to indicate at first acute peritonitis, then pneumonia of a circumscribed character, next paralysis of the intercostal muscles and the muscles in front of the neck, the hypothesis of septic fever, though sustained in other cases, had to be abandoned with respect to these particular ones. Some unknown poison was now assumed to be at the bottom of the outbreak, and an active inquiry into all the circumstances of the dinner was instituted. Every article of food and material was subjected to a most rigid examination, without any result in the first instance. But when the symptoms in some of the cases invaded the muscles of the leg, particularly the calves of some of the sufferers, the description which Zenker had given of a case of fatal trichinous disease was remembered. The remnants of sausage, and of pork employed in its manufacture, were examined with a microscope, and found to be literally swarming with encapsuled trichinæ. From the suffering muscles of several of the victims small pieces were excised, and under the microscope found charged with embryonic trichinæ in all stages of development. It could not be doubted any longer, that as many of the one hundred and three as had partaken of *Rostwurst* had been infested with trichinous disease by eating trichinous pork, the parasites of which had, at least in part, escaped the effects of smoking and frying.

This awful catastrophe awakened sympathy and fear throughout the whole of Germany. Most of the leading physicians were consulted in the interest of the sufferers, and some visited the neighborhood where most of the afflicted patients remained. But none could bring relief or cure. With an obstinacy unsurpassed by any other infectious or parasitic disease, trichiniasis carried its victims to the grave. Many anthelmintics were arrayed to destroy, if not the worms already in the flesh, at least those yet remaining in the intestinal canal. Picric acid was employed until its use seemed as dangerous as the disease; and benzole, which had promised well in experiments upon animals, was tried without avail. Subsequent dissections proved the parasites to have been unaffected by the agents employed

But medical science had unravelled a mystery; and if it could not save the victims, it was determined, at least, to turn the occasion to the next best account. The cases were therefore observed with care, and chronicled with skill. All the multifarious features of the parasitic disease were registered in such a manner, that there can hereafter be no difficulty in the diagnosis of this disorder. A valuable diagnostic feature was repeatedly observed —namely, the appearance of the flesh-worm under the thin mucuous membrane on the lower side of the tongue, and the natural history of trichina in man was found to be the same as that in animals.

All observations led to the conviction that the trichina encapsuled in the flesh is in the condition of puberty. Brought into the stomach, the calcareous capsule is digested with the flesh, and the trichina is set free. It probably feeds upon the

walls of the intestines themselves; for the irritation of the intestines commences before the bringing forth of *the young trichiniæ*. Copulation is immediately effected; and within a few hours, from sixty to eighty live embryos leave the female, and begin their own career of destruction.

This consists, in the first instance, in an attempt to pierce the walls of the intestinal canal. Great inflammation of the entire surface ensues, ending not rarely in death of the villous or mucous membrane, or in the formation of masses of pus on its surface. Sometimes there are bloody stools. But these severe symptoms only ensue when much trichinous meat has been eaten. When less has been consumed, pain and uneasiness in the abdomen are produced, accompanied, however, in all instances, by wasting, fever, and prostration. The embryos actually pierce the intestines, and are found free in the effusion, sometimes serous, sometimes purulent, which is always poured out into the abdominal cavity. Thence they again proceed towards the periphery of the body, pierce the peritoneum, causing great irritation, and sometimes peritonitis, to the extent of gluing the intestines together into a coherent mass. They next proceed to the muscles nearest to the abdomen: arriving at the elementary muscular fibres, they pierce the membranes, enter the fibres, eat and destroy their striated contents, consume a great part of the granular detritus, and move up and down in the fibres until grown to the size necessary for passing into the quiescent state. They then roll up in spiral or other irregular windings, the bags of the muscular fibres collapse, and where the trichinæ lie a calcareous matter is deposited, perhaps by the trichinæ themselves, which hardens into perfect capsules around the parasites. A muscular fibre may harbor one or several parasites; but every fibre invaded by a single parasite loses its character entirely, and becomes a bag of detritus from one end to the other.

If it be remembered that one ounce of meat filled with trichinæ may form the stock from which, in a few days, three millions of worms may be bred; and that these worms will destroy in the course of a few weeks not less than two millions of striated muscular fibres—an idea of the extent of destruction produced by these parasites can be formed. We are not in a position to say to what proportion of the fifty or sixty pounds of muscle required for the performances of the human body these two millions of elementary fibres actually amount. In the muscles nearest to the abdomen, the destruction is sometimes so complete, that not a fibre free from parasites can be found. *This amounts to complete paralysis.* But death is not always produced by the paralysis; it is mostly the result of paralysis, peritonitis, and irritative fever combined. No case is known in which trichiniasis, after having declared itself, has become arrested. All persons affected have either died, or are in such a state of prostration that their death is very probable.

Most educated people in Germany have, in consequence of the Hettstädt tragedy, adopted the law of Moses, and avoid pork in any form. To some of the large pig-breeders in Westphalia, who keep as many as two thousand pigs, the sinking of the price of pork has been a serious loss. In the dining-rooms of the hotels in the neighborhood of Hettstädt, notices are hung up announcing that pork will not be served in any form in these establishments. To counteract this panic, the farmers' club of the Hettstädt district gave a dinner, at which no other meat but pork was eaten, but it has had no appreciable effect: the raw ham and sausages of Germany are doomed to extinction. The smoked and fried sausages likewise must necessarily be avoided.

A merchant vessel shipped a pig at Valparaiso, which was killed a few days before its arrival at Hamburg. Most of the sailors ate of the pork in one form or other. Several were affected with trichinæ and died. Of those whose fate could be inquired into, one only seems to have escaped the parasites. Another outbreak in Saxony has carried away twelve persons. A fourth wholesale poisoning by trichinæ is just reported from Offenbach, the Birmingham of Hesse-Darmstadt. Of upwards of twenty persons infected, three had already died when our correspondent's letter left.

Numerous sporadic cases of fever, and epidemics of inscrutable peculiarity, but referred to an anomalous type of fever, are now claimed by medical authors, and with much show of reason, to have been outbreaks of trichiniasis, or flesh-worm disease.

Prof. Eckhardt at Glessen, we are told, has obtained permission to try the disease and supposed remedies upon a murderer under sentence of death. We have not been informed that his reward in case of success is to be a commutation of his capital sentence; but should hope it to be the case. The experiment, even should it not have the romantic character indicated, will probably teach some curious details of the life of these parasites.

A due regard to cleanliness would prevent trichinæ in the pig. In wild boars, of which many are eaten in the country around the Hartz Mountains, trichinæ have never been found. Neither have they been met with in sheep, oxen, or horses. Beef is the safest of all descriptions of meat, as no parasites have ever been discovered in it. They have also never been found in the blood, brain, or heart, of those animals in whose striated muscles they love to reside.—*Am. Jour. Med. Sciences.*

The author of the above article has exaggerated the fatality of trichiniasis, which is only then great when large numbers of the parasites are at work at the same time in the system.

Dr. Althaus, in an ably written article in the Medical Times, gives an excellent summary of all that is at present known on the subject; from it we abstract the following facts:

Trichinæ were first discovered in England, when in 1832 Mr. Hilton noticed in the human subject the minute cysts in which they are found enclosed, and which appear to the naked eye as small white corpuscles. In 1835 Professor Owen observed that these cysts contained worms, to which he gave the name of *trichina spiralis*, from their resemblance to a hair in size, and their being coiled up into spiral turns like a watch spring.

They are so minute that three of them stretched to their full length do not exceed a sixteenth of an inch; but when once in the stomach and freed from their cysts, the trichinæ awake, perhaps from the torpor of years, and beginning to move about, they lose their spiral figure and appear somewhat similar to ascarides. They here increase rapidly in growth, the female often acquiring the size of an eighth of an inch. Copulation commences a few days after the animal enters the intestinal canal, and in six weeks, having borne from 300 to 500 of their progeny, they cease to exist, for after this period not a trace of either males or females is to be discovered. The embryo on commencing their individual exist-

ence, is extremely minute and quite transparent, and possessing the power of rendering their heads extremely sharp, they pass through the tissues without leaving any visible traces of their migration. Their course seems somewhat arrested by the tendonous insertion of muscles, at which part they may usually be found most abundantly. Trichinæ which have not yet become encysted can only be recognized by means of a magnifying power of fifty. The deposit of chalk about the cysts generally requires months for completion, and gives the flesh the appearance and sensation as if containing sand, and grates on cutting through them with a knife.

The American Medical Times tells of a case in which the trichinæ were yet alive after ten years' torpor. Even when there are but few to be found they exist widely scattered throughout the whole of muscular tissue of the body, excepting, perhaps, that of the heart.

Since their discovery, in 1835, the trichinæ have frequently been noticed in different parts of the world. It was, however, only in 1860 that more minute investigations concerning their nature and development, were made by Professors Virchow, Leuckart, Zenker, and others. Zenker was the first to recognize these parasites as being the cause of illness and death, before which time they were considered more as a curiosity than a source of danger.

In the spring of 1862, about thirty cases of trichina disease occurred in Plauen in Saxony. Small pieces of muscular tissue were excised from some of the patients and examined by means of the microscope, and thus, for the first time, the diagnosis of trichiniasis was made in the living subject. Since then numerous cases of it have been observed in different parts of Germany, and no doubt many have occurred elsewhere which have not been recognized by medical men.

The disease produced by these parasites may be divided into three stages.

The first, including the period from the arrival of the trichinæ into the stomach, until the birth of the first of the progeny, is merely accompanied by loss of appetite and general malaise, and lasts usually from four to eight days.

The second and most important stage, comprising the morbid symptoms produced by the migration of the young from the bowels to their permanent abode in the muscular tissue, sets in with rigors, heat, quick pulse, loss of appetite, pain in the abdomen, either profuse diarrhœa or what is more frequent obstinate constipation, general prostration, and in severe cases, fever of a typhoid character sometimes accompanied by delirium. Among the many other symptoms may be enumerated dyspnœa, hoarseness, and œdema of the face, from trichinous invasion of the muscles of the chest, larynx and face; the swelling in the extremities follows a later period and closely resembles that of rheumatic fever, with this difference that the joints never suffer from these parasites. The fever soon becomes more asthenic in type, profuse perspiration sets in, miliary vesicles appear on the surface, the mind wanders, meteorism, diarrhœa, hæmoptœ, lobular pneumonia, effusions in the pleura, &c. take place, and death soon closes the scene. The average duration of the second stage is from three to six weeks, although fatal issue may take place much sooner and has been known as early as five days after the attack. Pregnant women generally abort during this period.

The third stage, or chronic trichiniasis, commences as soon as the parasites have taken up their permanent abode in the substance of the muscles, which remain weak and stiff for months. In a few cases, baldness of the head, desquamation of the skin, and painful boils have been observed to follow.

Dr. Althaus expresses the opinion that many practitioners in Great Britain and elsewhere may recollect cases of this kind, which have, at one time or another, fallen under their notice, and which, in the absence of sufficient information on the subject, have most likely been set down as forms of typhoid fever.

Treatment.—Emetics and purges prove useful when given very early. For the muscular pains, warm anodyne fomentations may be employed. When the fever is very severe mineral acids and digitalis are the best remedies, and care must be taken regularly to empty the bowels and bladder. Fomentations of vinegar may be employed for the profuse perspiration and miliary vesicles; and diuretics for the œdema, as the kidneys never suffer in such cases. The vital powers must be constantly sustained and stimuli liberally prescribed when necessary. Finally the patient should never be informed of the nature of his complaint. W. E. B.

Red Blood in the Veins.—Dr. Brown-Séquard arrives at the following conclusions regarding the colour of venous blood. 1. The blood is of a less deep color in the veins of limbs paralysed by section of their nerves or by destruction of a part of the spinal cord, than in the veins of sound limbs. 2. The diminished depth of color in the veins of paralysed limbs is due, at least in part, to the state of inaction of the muscles. 3. Paralysis of the blood-vessels may also produce a reddish color in the venous blood. 4. It is especially through their influence in exciting muscular contraction, that the nerves and galvanism increase the intensity of the dark color in venous blood.—*Br. Med. Jour.*

Paralysis of the Facial.—Hipodermic injections of strychnia have been successfully employed by a French surgeon for the removal of this form of paralysis. He employs a solution of one grain to a drachm and a-half of water, and injects from 8 to 16 minims along the course of the facial between its point of exit and the neck of the inferior maxilla, repeating it every second or third day. He increases the strength of the solution up to 1 in 70 if required; and finds in favorable cases the faculty of movement to become permanently restored in from ten days to a fortnight.—*Cincinnati Lancet and Obs.*

Thyroidean Laryngotomy.—Professor Bœckel, of Strasburg, relates a case of thyroidean laryngotomy which he lately performed in order to remove a number of polypoid vegetations situated behind the glottis, and threatening death from suffocation, in a young girl. He turned back the pieces of the thyroid cartilages like opening a book, and in this way readily reached the morbid growths. The wound was afterwards cauterized with nitrate of mercury. The tissues slowly healed, and the patient sent back to the country perfectly cured of the fits of suffocation to which she had been previously subject. The ultimate result was not ascertained, as she afterwards died of a disease of which M. Bœckel could get no

account. Of course by this operation the voice is destroyed; it is therefore not available except in similar cases of emergency.—*British Med. Journal.*

Canada Lancet.

MONTREAL, MAY 15, 1864.

A somewhat bitter controversy has recently arisen in Great Britain, from the death of a poor woman at Birkenhead, from post-partum haemorrhage. The woman, it appears, had engaged no doctor to attend her, and at the last moment, several that were hastily summoned, refused to have anything to do with the case, and the patient died in consequence of the delay.

The British Medical Journal defends the conduct of these physicians, on the ground that this woman was a portion of the public, and that a medical man should no more be called upon to work for it without remuneration, than a lawyer, or other member of it. That the system of gratuitous medical services, hitherto so widely given, has had but one tendency, namely, the degradation of the profession in the estimation of this very public. That it is the business of society to provide for the payment of the doctor, when called to cases of this kind. That those who complain of the conduct of the Birkenhead physicians should put their hands into their pockets and form a fund for this purpose; and, that these doctors are going the right way to work, to teach the community their true value, by refusing to attend cases without being paid.

The Medical Times, on the contrary, taking a higher view of the subject, holds that the doctor is morally and socially constrained to give his services to all. That it is his duty, first to save life when endangered, afterwards to seek remuneration. That a little knowledge of the world, and a little humanity, would keep most men from throwing away their services on those who do not need them, on the one hand, and from allowing a woman to perish from want of help, on the other. That to refuse our assistance in such cases, is to violate the first rule of morality. And that medical men should have other and nobler ends in view than mere pecuniary interests.

We need hardly say that we perfectly agree with the Times, in condemning any human being, whatever be his calling, who would refuse to employ every means in his power to save the life of a fellow creature. We nevertheless consider it the duty of the public to appoint visiting physicians to each district, on whom the poor may have a right to call in case of emergency; and that those physicians should be properly paid for their services. Nor would this, in our opinion, prevent medical men from continuing, as they have ever been, foremost in deeds of charity as it would have no other effect than to give them the liberty of selecting the objects of it. Altogether we are glad that the subject is being agitated, and hope that it will be productive of benefit both to the general and the medical poor.

We have received the first few numbers of a new weekly periodical "The New-York Medical Independent and Pharmaceutical Reporter." It seems to be ably conducted, and well supplied with original articles by talented contributors. We wish it every success.

UNIVERSITIES OF SCOTLAND.—A movement is at present on foot in the Scotch Universities to reduce the lectures on midwifery and materia medica to three months' courses, and to transfer these classes from the winter to the summer session. This improvement (?), in which the English schools some time ago set the example, has we understand, the support of the Universities of Glasgow and Aberdeen, but is opposed in the University of Edinburgh. —*Medical Circular.*

EXTRACT OF MALE FERN.

The ethereal extract is the preparation of male fern usually employed for the expulsion of tape worm, and is the only one given in the new Pharmacopœia. It is, as often styled, the oil of male-fern and is made by exhausting the root, by percolation with ether, which is afterwards distilled off, leaving a dark, oily liquid of the consistence of treacle. We have always been very successful with this extract, and generally prescribe for our patient two one drachm doses; directing the first to be taken in syrup or mucilage after a day's fast, and the second in three hours, with an ounce of castor oil. And if, on thorough search, the head cannot be discovered to have passed away with the evacuation nothing but a little gruel is allowed, and the dose with the oil is repeated the next morning.

Beale in his work on the Microscope (p. 39) directs from two to four drachms as a dose; Pereira (...) says from 30 m. to a drachm; while Christison (496) gives but 18 m. at night, and a similar dose in the morning.

We have been led to this subject on reading some excellent remarks in the British Medical Journal of the 9th April, by Dr. J. D. Rendle, of Brixton, Surrey, which we here subjoin. It will be perceived that his mode does away with the most objectionable part of our treatment, namely, the fasting.

"In every case of tape-worm which I have treated for the last three years, the mode of preparing the patient, the dose of the male-fern, and the way in which it was given, have been the same; all of which I will now briefly describe. The patient is sent to the infirmary, and late in the evening on the day of admission, the treatment is commenced by giving an ordinary two-ounce black draught; on the following day all solid food is forbidden, but an almost unlimited supply of beef-tea is allowed; even milk, which is said to be the favorite food of the worm, I purposely forbid. On the evening of this day, half an ounce of castor oil is administered, and early on the following morning, about three or four hours after taking the black draught, two fluid drachms of the oil of male-fern are given, suspended

ed in two ounces of thin mucilage of acacia. The result without an exception, in every case which I have thus treated, has been the expulsion of a dead worm within two hours after taking the remedy, and in one instance the worm was passed in fifteen minutes.

"I have had no difficulty in getting the patients to submit to this mode of treatment, nor have they complained of hunger. In order, however, to enable them to bear without much discomfort the prolonged abstinence from solid food, the supply of good beef-tea has, as I have stated, not only been unlimited, but each patient has also been kept in bed during the whole of the treatment.

"The principle of this mode of treatment is, evidently, simply that of emptying the stomach and small intestines by abstaining from all solid food, and by purging; and so, by thus thoroughly uncovering the worm, exposing it to the full and almost immediate action of the remedy.

"I have never, in a single instance, given more than one dose of the drug before the parasite was expelled; nor has the two-drachm dose given as I have mentioned, caused vomiting or troublesome purging; and in every case the worm was passed dead, and generally in one unbroken piece. No medicine of any kind is given except that which I have before mentioned; and, in a few hours after the worm is passed, the patients are restored to their ordinary diet.

"Before I was in the habit of preparing patients by the previous purging and abstinence which I have described, I generally found that the oil of male-fern failed as a remedy for the cases under consideration; but since I have adopted the mode of treatment which I now make public, I can say that I have never known it fail; and I cannot but feel certain that the remedy in question, if given as I have mentioned, will, invariably, first poison, and then quickly dislodge this troublesome parasite from the human body."

WEB.

TREATMENT OF IMPOTENCE.

By WILLIAM ACTON, M.R.C.S.

(*Concluded.*)

Cantharides have been employed against impotence. They form the basis of the *Pastilles de Sérail*, as well as of the numerous pills, pastes, and opiates which constitute in the East the principal commerce of all those who sell drugs. The Spanish fly enters largely into the *diacolini* and other aphrodisiac preparations, still too much employed in Italy. Lallemand protests strongly against the use of this drug. "The effect, he says, produced by cantharides on a healthy man has induced persons to believe that they could restore virility lost from excesses. Thus, charlatans, and even many legitimate practitioners, have at all times prescribed cantharides as a traditional resource. For my own part, I have seldom met with an impotent person who has not had cause to regret the use of this drug. The greater proportion have not even experienced the momentary benefit which they expected, and in many cases the erectile tissues have become smaller than in the habitual state of repose. Some few have experienced erections more or less energetic, which have lasted a longer or shorter period; but the loss of semen has exasperated symptoms instantaneously or very shortly afterwards."

No doubt can exist that the habitual employment of cantharides is prejudicial, but in the present day when this substance is no longer given as indiscriminately as it was formerly, the surgeon may often advantageously prescribe it. Thus, when erection is feeble, when the fears of the patient greatly influence his mind, or when there is doubt of success, in the copulative act, a few doses are very advisable. But after success, the remedy should be left off, for we do not want to excite the organs frequently, as the repeated shocks on the nervous system will often only further depress the vital powers.

Phosphorus is another of the pharmaceutical preparations which the modern surgeon frequently employs in the treatment of impotence. The object is to supply that particular pabulum which the exertion of nervous influence appears to exhaust. We may theoretically infer that in these complaints there is a great expenditure of phosphorus in its various combinations, and that there may be a deficiency of this substance in the system; just as in other diseases, particularly chlorosis, there is a deficiency of iron. In either case we should supply the system freely with the element it seems to need in such a way as that it may be easily taken up and retained in the circulation. Practice, as well as theory, seems to sanction this treatment, and I must admit that phosphoric acid in combination with syrups of orange-peel and ginger is a favorite formula with me, particularly in those cases where there is reason to suppose the semen is not secreted in sufficient abundance, or where too rapid ejaculation attends the sexual act, or when connection is attended with serious nervous depression.

Strychnine has been frequently recommended in the treatment of impotence, and, I believe, it is a very valuable tonic in cases attended with great nervous depression, whether resulting from sexual excess or any other cause. I have found it equally beneficial in those forms of impotence depending upon weak or imperfect erection. I find that it is capable of increasing the general muscular energy, and in such cases I usually prescribe it, either alone or in combination with quinine.

Electricity must be classed among the modern remedies for impotence. I have had considerable experience of this agent; and I have every reason to be satisfied with the results. I find that it has answered best in those lethargic constitutions that require rousing, and simply demand a local stimulant capable of determining blood and nervous power towards the generative system. When, on the contrary, there is debility dependent on previous over-excitement, this, as well as every other local stimulant, acts injuriously on the system. The patient can, by means of the batteries which may now be obtained anywhere, at no great cost, apply the remedy himself. I need hardly warn other than professional readers that this should *never* be ventured on except under medical advice.

Marriage has been classed among the remedies for the slighter affections of the sexual organs. It is very well to speak of it as advisable, and no doubt can exist that, in the slighter cases of nocturnal emission, the cure of the complaint will be speedily effected by marriage—that is to say, sexual intercourse will cause the disappearance of the nocturnal symptom.

In practice, however, the question comes before the surgeon in a different way. A patient will complain of a variety of local sexual ailments, which perhaps he has suffered from during long periods, and when he is asked why he wishes now to be

treated, the reply often is, that as he is desirous to marry, he is anxious to be informed if he may do so, or if he is competent to perform his marital duties. He will sometimes resort to us under the full conviction that he is physically unable to consummate the nuptials, and he is nervous at the idea of exposing himself to the chance of being found impotent. In such cases as these it is useless to advise marriage, for the patient will sometimes tell you that he has attempted connexion, failed in his endeavors, and intends remaining a bachelor for life.

Lallemand thinks that, in the slighter cases of functional disease, no doubt can exist that marriage may completely cure the patient, before continued excess or evil habit has produced those ill consequences which have been described for; "the regular exercise of organs will alone give all the energy of which they are susceptible, and those of generation are far from forming an exception to this general law. To complete the cure, it is necessary that sexual relations should be established.

In the confirmed cases, where irritation or inflammation is set up in the vesiculæ seminales, or when diurnal or nocturnal emissions take place involuntarily, the man who is injudiciously persuaded to "commit" matrimony will only aggravate the complaint. He will probably find all his previous symptoms exaggerated, and erection, even under excitement, will probably not take place. And even if it does, ejaculation may precede the intromission of the virile organ, or in many cases will not occur at all.

Let his parents or advisers consider the position of this inefficient bridegroom; let them picture to themselves his disappointment, chagrin, and shame. Is it wonderful that, under such circumstances, more than one has committed suicide? But, as the professor of Montpelier has nobly observed. "What has the young girl, who is thus sacrificed to an egotistical calculation, done, that she should be condemned to the existence that awaits her? Who has the right to regard her as a therapeutic agent, and to risk thus lightly her future prospects, her repose, and the happiness of the remainder of her life?

"Until a man has contracted these indissoluble bonds, impotence the most complete can compromise the future of no one.

"It is precisely because marriage is the most sacred bond for individuals, as well as the most important for society, and because an iron law renders it indissoluble, that it is rational as well as moral not to contract it without the certainty that it will be perfect and complete."

In practice, however, we find that the plans of parents and the advice of the surgeon are alike frustrated by other considerations. In many cases the patient is too young to marry; in other instances of spermatorrhœa the dislike to marriage is such that every woman is distasteful to the sufferer, as if nature really intended to spare the victim those mental sufferings we have noted as attendants on these ill-starred matches.

Indeed my experience is that, as a general rule, there is little need to dissuade those who ought not to marry, from doing so. Our task is rather in the other direction—to encourage those nervous, hypochondriacal people to marry and be happy, who, from a bad conscience, a weak frame, the effects of depressed health, or some wild ideas of the possible requirements of the young lady, on a subject of which all well brought-up English maidens are ignorant, fancy that they are unfit to undertake the rational duties of husband and father.

Assimilation of Isomorphus Substances.—M. Roussin has performed a series of experiments on hens and rabbits, in order to ascertain whether similarity in form and composition is accompanied by any peculiar physiological properties. In one series of experiments, he investigated this question with regard to the shell of the hen's egg. This contains 90 per cent. of carbonate of lime; and he endeavored to ascertain whether other isomorphus carbonates could be made to replace the lime-salt in the shell. Accordingly, some hens, some time before laying, were shut up in wooden cages, at a distance from the ground and from any wall, and were fed with potatoes and oatmeal, or with oatmeal moistened with water. With their food, the substances with which the experiments were made, were mingled. The result of these experiments was, that carbonates of baryta, strontia and magnesia, peroxide of manganese, protoxides of iron, zinc, copper, lead, cobalt, or the oxides of these metals, were readily assimilated by the hens and eliminated in the coverings of their eggs. Alumina, sesquioxide of iron, manganese, and the oxides of antimony, were never found in the egg-shell.

Another series of experiments had relation to the soft parts of the egg. The albumen and yolk yield, on calcination, a notable proportion of chloride of sodium. As the alkaline iodides, bromides, and fluorides are isomorphus with this salt, it was endeavored to ascertain whether, after their administration, iodine, bromine, or fluorine, would be found in the egg. Not only was this the case, but the quantity of these elements present in the egg was remarkably large. They were apparently distributed in equal proportions between the albumen and the yolk. Eggs containing bromine, iodine, or fluorine, have no peculiarity of taste; and it is suggested that this observation may be made useful for therapeutic purposes.

The administration of the alkaline iodides, and especially of the bromides, was accompanied by a singular phenomenon, viz., the gradual disappearance, in some instances, of the calcareous covering, in proportion to the increase of the above named substances in the interior of the egg. This occurred in hens left at liberty, and having free access to carbonate of lime; and was not generally observed in strong birds with good appetite.

In a third series of experiments, it was endeavoured to ascertain whether arseniate of lime could be assimilated and substituted for phosphate of lime in the bones—the arseniates being isomorphus with the phosphates. The result was found to be that, when small quantities of arseniate of lime are introduced into the food of a female rabbit, the animal gives birth to young whose bony skeleton contains a notable proportion of arsenic, while their muscular tissue contains scarcely any trace. The arsenical compound is also eliminated by the urine in the form of arseniate of ammonia and magnesia.

M. Roussin concludes from his experiments, that substances isomorphus chemically are assimilated and eliminated in a like manner from the animal economy, and may be regarded as isomorphous in a physiological point of view.—*Gazette Méd. de Paris, and Br. Med. Jour.*

POST-PARTUM HŒMORRHAGE.

In an able communication on post-partum hæmorrhage, now in publishing the Medical Circular, by Dr J. L. Earle, obstetric surgeon to the Queen's Hospital, Birmingham, we select the following:

As well known, the late Dr. Rigby recommended the application of the child to the breast soon after delivery as a means of preventing post-partum hæmorrhage. I have tried this plan, and found it answered in some cases, while it failed in others. In order to apply the child to the breast, the mother is obliged to make some exertion, for the breast has to be exposed; then this plan fails very often, because the child will not or cannot suckle. The new-born infant is sometimes disinclined to suckle immediately after its birth; or it cannot do so from the mother having a small or flat nipple, or from some fault on its own side, as cleft palate, or tied tongue, for example. The mother, in her anxiety to make the child take the breast, moves herself, thinking that perhaps her position is awkward to the infant, or she pulls the child to her, and tries by every means in her power to make it take hold of the nipple. These movements of the patient are liable to place her in danger; and I have seen one or two instances of flooding after labor, the cause of which I could not attribute to anything else but the exertion made by the mother in the often fruitless attempts to get the child to suckle. For the above reasons, I have for some time discontinued the application of the child to the breast as unsatisfactory.

In its place, however, I substitute, in cases where the uterus seems disinclined to contract, a plan which is exactly the same in principle, has all the advantages, without any of its disadvantages. It consists of compression of the breast with the hand. If we place one hand upon the uterus, while we grasp the breast with the other, the uterus will be felt to contract almost instantaneously. As the patient lies on her left side, the hand should be passed under the axilla of her right arm; the hand will then come at once upon the breast. Gentle compression or squeezing of the breast should be employed at regular intervals. Latterly, I have somewhat modified the mode of exciting sympathy between the breast and uterus. Instead of squeezing the breast, I imitate the sucking action of an infant by placing the thumb and index finger on each side of the nipple, about an inch and a half or two inches from each other, and then I draw them forward just in the same way as if I were desirous of drawing a little milk to the apex of the nipple for microscopical examination in a case of suspected pregnancy, only the action must be much quicker, and repeated frequently. As a preventive means, there is no necessity for the medical attendant to use this precaution himself. The nurse should be shown how to manage it. She merely has to pass her hand under the axilla of the arm of the patient, feel for the nipple outside the chemise, and use the thumb and finger as described. In some cases when I am going to remove the placenta, I direct the nurse to place her left hand upon the breast, and the right hand on the uterus, and press them both at the same time, while I remove the placenta. It assists in insuring a firm contraction of the uterus.

The irritation of the mamma with the hand is preferable to the application of the child to the breast, for the following reasons: 1. It insures perfect rest to the mother. 2. It can be kept up for any length of time. 3. There is no chance of failure in its application. It is not requisite to employ this precaution in every instance: only in those cases where the uterus feels flabby, and there is great difficulty in stimulating it to contract. Before leaving the house, if I have any apprehensions of hæmorrhage commencing after my departure, I give the nurse directions to continue its employment for some considerable time.

TREATMENT OF DYSENTERY BY LARGE DOSES OF IPECACUANHA.

This plan of treatment was introduced, or brought prominently forward, by Dr. Docker, of Mauritius. The use of ipecacuanha in dysentery is by no means novel; but the employment of such large doses, and in the method here described, is, Dr. Hillier said of comparatively recent date.

The plan is to give a drachm of tincture of opium, to apply a mustard plaster over the epigastrium, and, in twenty minutes, to give a drachm or a drachm and a-half of powdered ipecacuanha in a very small quantity of peppermint water, or simple water. Sometimes half an ounce or an ounce of castor oil is given, with half a drachm of laudanum, before beginning the special treatment; this is however, usually found to be unnecessary. Vomiting is not often induced, and the cure is often immediate. A patient may be passing every half hour or oftener, blood and mucus, or bloody serum with pus. They cease at once for about twenty-four hours; he then has a natural stool, and is well. The diet is farinaceous.

In May, 1862, Mr. Baylis, of Ceylon, wrote to Dr. Hillier that he had treated fifty or sixty cases in this way, and only lost three, who were in articulo mortis when they came under his care. He writes that he has continued the plan of treatment up to the present time, and expresses himself equally satisfied with it. He gives the following as an illustration of the results of this treatment:—

"A highly phthisical young gentleman, in whose lungs softening had commenced, came out here for his health. I told him the climate would not suit him. However, he disregarded my advice, and I was soon called to see him. I found him in bed, unable to speak above a whisper; pulse very weak, about 100; face flushed; tongue thickly coated with yellow fur; tenderness and pain in the abdomen, especially in the left iliac region. He had been suffering from diarrhœa for four days. During that day and previous night he had passed upwards of sixty motions; they were at first copiously feculent, latterly, almost pure blood, with a little slime. He had been feeding most imprudently. I gave him at once a drachm of laudanum, and put a mustard plaster on his epigrastrium. In twenty minutes I gave him a drachm of ipecacuanha powder in a wineglass of water. He did not vomit. Those who saw him at this time thought he could not live twenty-four hours. Next morning he was much the same; had fainted once or twice on going to stool, but had only passed seven motions, composed of blood and stuff like the washings of meat. He now had much pain in the stomach and bowels. I ordered an opiate injection three times a-day, and at 6 p.m. put on a blister and repeated the laudanum, followed by the ipecacuanha, as on the previous day. Next day he passed only two motions; there was just a trace of blood, but they were

largely feculent. The morning after, the motions were solid and natural, and he rapidly recovered without more medicine. His diet was sago and arrowroot."

Dr. Hillier has had the opportunity of trying this mode of treatment at the Children's Hospital. It was in the case of a child, aged 4 years, suffering from subacute dysentery contracted in Barbadoes. He gave five minims of laudanum, and, in half an hour fifteen grains of powdered ipecacuanha. There was no nausea or any unpleasant symptom caused by the medicine; and although the patient had previously passed five or six motions, containing much blood and mucus, every twenty-four hours, there was no evacuation for thirty-six hours. He then passed an ordinary feculent motion, and from that time he continued quite well. It is stated that ipecacuanha has the effect of rapidly healing large dysenteric ulcers. Dr. Hillier suggested that it might be worth while to try it in the diarrhœa dependent on tubercular ulceration, or in typhoid fever. The opium is supposed to act mainly in preventing vomiting, but it may, with ipecacuanha, have a more specific action on the disease.—*Med. Times.*

M. Homolle has found the following powder efficacious in two cases where obstinate constipation had raised the question of operation for artificial anus: Powdered strychnine [illegible]th gr.; powdered nux vomica, [illegible]th gr.; calcined magnesia, 6 grs.—Mix. One powder a day at first, then two, and finally three per diem.—*Lancet.*

To Correspondents.

R. The physicians of Great Britain are not yet, as a general rule, prescribing by the new Pharmacopœia, but will doubtless do so more and more as they become acquainted with its details.

Rat Poison.—Carbonate of Baryta is said to be an excellent exterminator of rats. It is tasteless, and readily eaten by them when mixed with any of their ordinary food. As in the human stomach, it becomes decomposed by the gastric juice and acts as an irritant poison.

G. Dr. Farre, of St. Bartholomew's Hospital, promises an abridged edition of Pareira's Materia Medica, in October next. Professor Bentley, of King's College, and Mr. Warington, of Apothecary's Hall, are assisting him in its preparation. The work will contain the new Pharmacopœia, and be especially adapted for students.

Wafer Paper.—Two flat-irons are warmed to a temperature at which they may be touched without burning the fingers, yet not so hot as to occasion a globule of water to run off when thrown on the level surface. One of the irons should be kept at a slightly increased temperature, over some live coals; and, their surfaces being very slightly buttered, a portion of finest rice or wheaten flour mixed with water, into a smooth batter is to be poured over the inverted one when the other is at once to be pressed upon it; after a minute or two the water may be removed and trimmed into shape. French wafers are cut into circular disks of about 8½ inches in diameter by means of punches, but a square wafer is better adapted for enveloping powders. It is to be first moistened by dipping it into a tumbler of water, then laid on the palm of the hand, the powder or pill placed in the centre, and the edges folded over it; it may then be swallowed like an oyster without imparting any taste of its contents.—*Chemist and Druggist.*

V.—A bright deposite of metallic silver may be produced from a strong solution of the nitrate by means of a thick alcoholic solution of tannin; and if the liquid be evaporated to dryness, the coating will become pretty firmly fixed to the surface. A like coating of copper may also be produced from a saturated solution of the sulphate by means of tannin.—*Pharm. Jour.*

Best Smelling Salts.—Over 10 oz. of carbonate of ammonia pour 5 oz. of the strongest solution of ammonia (sp. gr. 880) and lay it aside in a tight vessel and a cool place, stirring it with a stiff spatula every other day for a week. Then allow it to remain for two or three weeks, by which time it will have become hard—so hard that if it had not been stirred it would be almost impossible to remove it without breaking the jar. It occasionally, however, requires a week or two longer to solidify, after which it may be reduced to a coarse powder and filled into bottles, a few drops more of the liquor ammonia added to each, cause it assume a crystalline appearance in the bottle. It may of course be perfumed if desired.—*Pharm. Journal.*

Medical Works published in Great Britain from the 1st April to the 1st May, 1864, with their sizes, numbers of pages, publishers' names, and prices in sterling.

British Pharmacopœia, 18mo. pp. 468, Spottiswoode, [illegible]
Gant (Frederick James), Principles of Surgery, Clinical, Medical, and Operative, 8vo pp. 570, (Churchill) 18s.
Gibb (George Duncan) On Diseases of the Throat and Windpipe, 2nd edit. post 8vo pp. 588, (Churchill) 10s 6d.
Griffin (John Joseph) Chemical experiments, post 8vo (Griffin) 12s 6d.
Haselden (A. F.) Notes on the British Pharmacopœia, showing the additions, omissions, &c with the doses of those medicines which are comparatively new, 12mo pp. 118 (Hardwicke) 2s 6d.
Huxley (Thomas Henry) Lectures on the Elements of Comparative Anatomy in the Classification of Animals, and in the Vertebrate skull 8vo pp. 290, (Churchill) 10s 6d.
Meadows (Alfred), The Prescribers Companion 32mo. pp. 158, Renshaw 2s 6d.
Harvey (John) Corpulence, its Diminution and Cure without Injury to Health, 8vo pp. 30, (J. Smith) 1s.
Barber, (George) On the Materia Medica and preparations of the British Pharmacopœia 12mo pp. 30, (Simpkin) [illegible]
Barber (George). The British and London Pharmacopœias compared with a Posological Table 16mo., (Simpkin) [illegible]
Madden (Thomas Moore) On Climate, and the Localities to be resorted to by Invalids being the result of extensive personal experience of many Southern Climes post 8vo. pp 280, (Newby) 12s.
Prescriber's (The) Pharmacopœia, containing all the Medicines in the British Pharmacopœia, arranged in Classes according to their Action, with their Composition and Doses. By a Practising Physician. 5th edition 32mo pp. 158, (Churchill) 2s 6d.

Periodicals received since 15th April.

London Medical Times to 23rd Ap. British Medical Journal to 23rd Ap. Journal de Médecine de Bordeaux, Jan., Feb. & Mar. Australasian Med. and Surg. Review, Melbourne, Dec. London Medical Circular, 27th Ap. American Medical Times to 7th May. Boston Med. and Surg. Journal to 12th May. Philadelphia Medical and Surgical Reporter to 9th April. Chicago Medical Examiner, April and May. Philadelphia Dental Cosmos, April and May. Chicago Medical Journal, April. Buffalo Medical and Surgical Journal, April. Pacific Medical and Surgical Journal, San Francisco, March. London Pharmaceutical Journal April. American Druggists' Circular, May. London Chemist and Druggist, April. New York Medical Independent to 11th May. London Publisher's Circular, 1st May.

First year Subscriptions paid since last issue.

Dr J. Buzzell, Portland.

Second year Subscriptions paid since last issue.

Dr. J. G. Orr Bondhead, Dr. J. Baxter, Cayuga; [illegible] T. Christie, Lachute; Dr. J. E. Coderre, Montreal; Dr. [illegible] Cartier, Vaudreuil, Dr. H. G. Moody, Gaspé; Dr. W. A. Case, Hamilton, Dr. Smith, Ancaster; Dr. R. W[illegible]man, Toronto; Dr. J. E. Johnston, Sorel; Dr. D. Yo[illegible] Bath; Dr. Jno. Clarke, Simcoe; Dr R. S. Priddy, Sim[illegible] Dr. H. Townsend, Albany; Dr. K. Reid, Huntingdon; [illegible] M Scott, Leeds, Dr Jos. Frégeau, Lawrenceville, [illegible] Wolverton, Grimsby, J. Fortune, Esq., Huntingdon; [illegible] H. H. Sauvé, Buckingham; Dr. Wm Relin, L'Assomption; Dr. W. Ewing, Hawkesbury; Dr. R. Moore, Adare.

DEATH.

In Philadelphia, on the 23rd March ult., Dr. John [illegible]man Coxe, in the 91st year of his age.

He was for many years a Professor in the University of Pennsylvania, from which he retired in 1835. He was [illegible] first to introduce vaccination into the United States, [illegible] the inventor of the well-known Coxe's Hive Syrup.

The Canada Lancet is published monthly at the [illegible] one dollar, (or four shillings sterling) per annum. Remittances may be made to W. E. Bowman, M.D., Editor [illegible] Proprietor, or to Mr. John Lovell.

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