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ORIGINAL ARTICLES.

(No paper published or to be published elsewhere as original, will be accepted in this department.)

A WEEK'S WORK IN GYNÆCOLOGY.

By KENNETH N. FENWICK, M.A., M.D., Kingston.

The week ending July 14th, 1894, was a busy one at "The Doran," and a brief account of the cases may be of interest to your readers.

Case 1.—Mrs. S. K., aged twenty-four, has had three children and one miscarriage. Her last child was born on April 20th, and was followed on the third day by septicaemia. Two weeks after this she was admitted to hospital, where she remained for six weeks, her temperature varying from 100° to 103°, and suffering from all the symptoms of so-called parametritis, although I suspected the existence of a pus tube. The pain and swelling subsided as well as the fever, so she left, but returned in two weeks still suffering pain and having some fever. On July 9th, I opened the abdomen and found the left tube adherent and very much inflamed, as well as the ovary, which I removed. She had an uninterrupted recovery. She called to-day (September 8th), and says she feels quite well, has no pain, and has not been unwell since birth of her last child.

Case 2.—Miss F., aged thirty-seven, has suffered for years from dysmenorrhœa, and lately from menorrhagia; has great tenderness and pain over both ovaries, but especially the left one, which felt distinctly cystic. The pain was

very severe a few days before each period. The usual routine treatment had been tried, including dilatation and curetting of the uterus. On July 10th I performed a celotomy and removed both ovaries, which were markedly diseased, especially the left one, upon which was a cyst as large as a walnut, and was ruptured while being removed. She made a rapid recovery, and is now quite free from pain.

Case 3.—Miss M., aged thirty, was a case of irreducible right inguinal hernia, upon which Dr. Wood kindly asked me to operate. She had a lump in the inguinal region about half the size of the fist, and evidently containing fluid and probably omentum. She has frequently suffered from indications of strangulation, which have subsided without any further trouble than an increased size of the lump, probably due to increase of its serous contents. On July 11th, I made an incision over the tumour, and, on opening the sac, found it full of a straw-coloured fluid, and at the bottom a piece of omentum was protruding through the external ring and bound by adhesions to its edge. These adhesions were freed by dissection, the omentum drawn down, secured by double silk ligature and removed. In order to do this, the ring had to be enlarged with a probe-pointed bistoury. There was now found to be considerable oozing of blood, and it became necessary to open freely the canal, and with my powerful hand electric lamp the bleeding was seen to come from the deep epigastric artery which had been cut. This was at once secured and tied. The sac was then tied and excised, the edges of conjoined tendon stitched with silk-worm gut to Poupert's ligament, and the wound closed. She made a good recovery, some of the stitches being left in for three weeks.

Case 4.—Miss M. T., aged thirty-four, was very similar to Case 2 in every way. On July 12th I performed a celotomy and removed both ovaries, which were badly diseased, especially the right one, upon which was a large dark cystic tumour. In this case I closed the wound with silk-worm gut sutures through all the tissues, and not by buried cat-gut and continuous tissue sutures, as I have been in the habit of doing in my other cases. She made an uninterrupted recovery, and has been quite free from pain. It is hardly necessary to say that every aseptic and antiseptic precaution was most carefully carried out, and to this it is largely due the success we have had with these cases in the new building.

Case 5.—Mrs. J. K., aged forty-three, came to me five years ago suffering from the results of a neglected laceration of the cervix. I did a trachelorrhaphy on June 19th, 1889, but two years ago she had another child, the labour being very severe, and she now returns much broken down in health, suffering from profuse menstruation, greenish-yellow leucorrhœa, and pain in back. I found a double laceration of the cervix, cystocele and lacerated perineum. On July 13th I did a trachelorrhaphy, using, as I always do in these cases, chromic cat-gut, which remains in for two weeks, and does not require removal as silver wire and silk-worm gut do, thus endangering the opening of the wound while a great discomfort to the patient. I then did

Stoltz's operation for the cure of the cystocele. This consisted in an anterior colporrhaphy, using a purse-string suture of silk-worm gut. Finally, I repaired the perineum by a modification of Wylie's method, using two chromic cat-gut sutures in the vagina, which become absorbed, and bringing the remainder of the wound together by silk-worm gut sutures, which are removed about the eighth day. This case did remarkably well, and she wrote on September 1st that she felt better than she had for three years past.

Case 6.—Mrs. W. B., aged thirty-one, was suffering from a unilateral laceration of the cervix. Trachelorrhaphy was performed on July 14th.

Case 7.—Mrs. J. M., aged thirty-seven, had a double laceration of the cervix and a badly torn perineum. These were repaired on July 14th, in same manner as Case 5.

Case 8.—Mrs. W. C., aged fifty-six, has had ten children, and has not been unwell for eight years. She suffers from dyspepsia, bearing down and frequent micturition. A polypoid tumour was found attached to inner edge of cervix. This was removed by scissors and curette. The bladder was then carefully explored by Kelly's cystoscope, using the electric lamp and reflector. The surface of the bladder was found congested and inflamed. Daily washing out with a very dilute solution of argent. nitrat and an alkaline mixture with buchu internally resulted in very marked benefit. This completes the list for the week, eleven operations on eight patients, and in not a single case did the temperature ever rise above 99°.

Special Selections.

PREVALENCE OF BOVINE TUBERCULOSIS.*

By Dr. AUSTIN PETERS, Boston.

Tuberculosis has been known for all time, and among all civilized people, and in all habitable climates. Among cattle-keeping people it is known among their bovines; and while it continues to exist among the human race, it will prevail among their cattle, its prevalence among the latter depending upon how they are kept, where they are kept, what they are kept for, and upon the susceptibility of certain breeds or the constitutions of certain individuals.

Among the human family, as well as among the ox tribe, has Pharaoh's dream being constantly repeated, from the days of Joseph to the present day. The seven well-favoured, fat-fleshed kine have been devoured over and over again by the seven ill-favoured and lean-fleshed kine, which, I have not the least doubt, were suffering with tuberculosis. It is not even necessary to have the seven ill-favoured and lean-fleshed kine to devour the seven healthy ones; for if a single tuberculous cow be placed in a dark, badly-ventilated stable with the seven well-favoured ones, kept under unhealthy surroundings and forced to an enormous yield of milk, this single ill-favoured and lean-fleshed individual will in time succeed in devouring the seven well-favoured ones. Notwithstanding the fact that the

milk from this herd yields the greatly-to-be-desired 13 per cent. of total solids, yet will there be "death in the pot," or rather in the milk-can—"consumption at eight cents a quart," or cholera infantum at the same price, or perhaps a pleasing mixture of the two commodities combined.

Admitting that tuberculosis is due to a specific germ—the bacillus of tuberculosis—and that it can be communicated from one animal to another of the same or a different species by means of the expectorations after they become dry, or by the consumption of the flesh, milk, or dairy products of tuberculous cattle; yet, in order to appreciate the danger to human beings from the use of the dairy products of tuberculous cows, it is important to have some idea of its prevalence.

It is an impossibility to get any statistics to show the extent to which this malady exists among our bovine population, but I think I can show that it is of sufficient frequency to be of very great importance from a sanitary and economic standpoint.

Fleming, in his "Manual of Veterinary Sanitary Science and Police," in speaking of the geographical distribution of this disease among animals, says: "Tubercular phthisis, or tuberculosis, probably prevails among domesticated animals over the entire globe, though its frequency will depend upon various external influences as well as the constitutional tendencies of different species and breeds. In some countries it is enzootic and very destructive. Such is the case in densely populated districts and in unhealthy climates, or in regions where animals are improperly fed and

* Read before the Massachusetts Veterinary Association, May 23rd, 1894.

housed. In Mexico, for instance, it is very common and causes much loss; about thirty-four per cent. of the animals slaughtered for food being found affected. In Europe, particularly in the cow-sheds of the large towns and cities, it is extensively prevalent; and in this country (meaning England) it has long been recognized as a common disorder among animals, but more especially as affecting the bovine species."

Walley, in "Four Bovine Scourges," considers contagious pleuro-pneumonia, rinderpest, foot-and-mouth disease and tuberculosis as the four great cattle plagues of the world.

In this country rinderpest is unknown; foot-and-mouth disease does not exist at present; contagious pleuro-pneumonia has been stamped out in every locality in the United States where it has ever existed. So that to-day we can safely say that the only one of the four great bovine scourges staring us in the face and challenging us to combat, if we are not afraid to grapple with it, is tuberculosis.

During the past four or five years many of the States, particularly in the East, have been aroused to take steps to eradicate tuberculosis from among their neat stock, chiefly by having the work attended to by cattle commissions; and while numbers of cattle are examined, yet, as a rule, the work has not been done in a way to give any idea of what relation the number of diseased cattle bears to the number of healthy ones, or what the ratio of herds where the malady exists, is to the herds where the creatures are all healthy.

During the winter of 1892 and 1893

the New York State Board of Health, having been empowered to regulate the matter of bovine tuberculosis in that State, undertook a farm-to-farm inspection of the cattle in two dairy districts, with a view of ascertaining about the percentage of tuberculous cows in a certain region. In lower Westchester County approximately 10,000 head were examined, and in the neighbourhood of eighty were destroyed as tuberculous, or .8 per cent. In Orange County, in the neighbourhood of Monroe, about 10,000 head of cattle were examined, and thirty-five were killed as tuberculous, or .35 per cent.

In testing herds with tuberculin, I have found that by means of the old-fashioned physical examination about one case out of three present could be picked out; that is, after diagnosing the cases present in a herd by means of a physical examination, and then testing it with tuberculin, three animals will react to every one found by means of an ordinary diagnosis. Taking this for granted, it is safe to say that among the herds of the farmers in a district like Orange County, which somewhat resembles Worcester County, about one per cent. of the cows are tuberculous, these herds being made up largely of hardy grades of the Ayrshire, Holstein and Short-horn families. In Westchester County, nearer New York city, where more cattle of the Channel Island breeds are found, and the system of dairy farming more nearly resembles the milkmen's management on the outskirts of our large towns and cities in Eastern Massachusetts, it is safe to say that between two and three per cent. of the cows are tuber-

culous, allowing that only one case can be detected by means of a physical examination to three that will show a well-marked reaction to tuberculin. These figures compare quite evenly with the abattoir statistics of many of the cities of France, Germany, Belgium and Holland.

In Eastern Massachusetts we have no exact figures to give us statistics ; but it seems to me that bovine tuberculosis must be much more frequent here than even in Westchester County, N.Y., or else I have been unfortunate enough to be called, during the past winter, to see so many herds where tuberculosis exists, as to prejudice me into this belief. Since December 1st last, I have had occasion to examine about five hundred head of cattle in Eastern Massachusetts, of which seventy-five have been tuberculous ; but then, of course, I am very likely to be called to examine creatures where the presence of tuberculosis is known or suspected.

As to the prevalence of tuberculosis among cattle of various ages and sexes, abattoir statistics show it to be very rare in calves killed for veal. It is seldom seen in steers and oxen killed for beef ; in fact, it is almost unknown among our Western bees. It is seen chiefly in cows when slaughtered for food, and is met most frequently among dairy cows from the outskirts of large cities and towns. Here it is found more among the older cows, the lesion being much more readily found in cows over six years old than among those younger. That is, overcrowding in unsanitary stables and the depicting influences of lactation are the two great predisposing causes. Among certain fancy herds

of pure-breds of different breeds tuberculosis exists to an alarming extent ; but this is because some of our breeders have nurtured this malady as carefully for years as though they were trying to breed tubercle bacilli instead of cattle.

In Massachusetts our system for dealing with bovine tuberculosis is faulty ; in the first place, this is a commission-ridden State ; everything is managed by commissions of three or more men. It is a well-known fact that an army of three generals would meet with defeat ; a ship with three captains would meet with disaster ; a railroad with three superintendents would go into bankruptcy ; and yet that which would bring defeat in war, disaster in commerce, and bankruptcy in business, is expected to work successfully in the affairs of an over-taxed people. These are the views of Seth Low, president of Columbia College, and Gamaliel Bradford. The only possible excuse for such a system is that it furnishes salaries for a lot of played-out politicians and impecunious lawyers, instead of placing the management of affairs in the hands of single, responsible heads, directly accountable to the appointing power.

Another criticism of the present state of affairs is the system of town and city cattle inspectors. One city or town may appoint a competent veterinarian to such a position (these instances are rare) ; a few more cities or towns may appoint an incompetent veterinarian, who is but a very slight improvement over any other ignoramus ; but in most instances the appointees are men of no special qualifications for the positions they hold ; their examinations of herds are farces,

and the certificates they write are not worth the paper they are written on.

I am in favour of having a State veterinarian, who shall be responsible either to the State Board of Health or to the State Board of Agriculture, depending upon whether this subject is considered most important from a public health or an agricultural point of view; then divide the State into districts, say ten or a dozen in number, and appoint the best veterinarian in that district (that is the best cattle practitioner, as the best horseman is not always the best cowman) district veterinary inspector, to act under directions from the State veterinarian. Furthermore, owners of animals suffering from contagious diseases should be reimbursed. The co-operation of farmers in eradicating bovine tuberculosis will never be secured until this is done. There should be also an arrangement for utilizing the meat of slightly-diseased cattle for food, and the proceeds of these sales should be used for helping to pay the expenses of this work. It is an outrage to destroy a man's property without paying for it, and absurd to say that tuberculous cattle are not property.

The relation that the use of milk from consumptive cows bears to the malady in mankind will never be known until thorough steps are taken to prevent its use. If all the tuberculous cattle in the State were killed to-morrow, and infected stables burned, there would be a fresh supply in a few years from the contamination of consumptive persons, unless Boards of Health and physicians are ready to look upon it as an infectious disease, call it thus in annual reports and vital

statistics, and take steps for preventing its spread from person to person, and from mankind to cow. If we start a crusade against the poor cow, without taking any other precautions to guard against it, we shall be simply continuing to prevent a waste at the spigot, while there is a big leak at the bung.

Sterilizing food is a safeguard to the public health; on the other hand, there is the economic standpoint of great importance to the farmer of protecting healthy from diseased cows.

I suppose that what I have said will lead to the old time hue-and-cry, that "the horse-doctors want a pull at the public crib, but they shan't have it" so long as there are any fossilised politicians, unsuccessful lawyers, or even decayed labour-leaders to be provided for; but let me remind you that a capable veterinarian can make more in private practice than the salaries usually paid by the State amounts to, and as I generally give my text at the end of my sermons, instead of at the beginning, I will simply suggest to you, "To render unto Cæsar the things that are Cæsar's, and unto God the things that are God's."

DIAGNOSIS AND PREVENTION OF BOVINE TUBERCULOSIS.*

By Dr. J. F. WINCHESTER, Lawrence, Mass.

It is essential in discussing the diagnosis of tuberculosis, to bear in mind that the veterinary surgeon may be called upon to say whether

*Read before the Massachusetts Veterinary Association, May 23, 1894.

an animal is affected or not, under two very different circumstances. He may, in one instance, be expected to make a differential diagnosis in a case where the animal is noticed to be ill, and regarding which his advice is desired by the owner; or, in another animal, as a veterinary inspector, he is expected to recognize the disease, when to the ordinary observer and owner the animal has the general appearance of health. It certainly must be very apparent, that if there exists any uncertainty in the first of these conditions, by a physical examination, how much greater must that difficulty be in the second. In order to illustrate this difference, one ought to bear in mind the lesions found at the autopsy of animals that have died from tuberculosis, or have been killed because hopelessly afflicted with it, in the first instance; and those lesions of tuberculosis which are found in animals killed for food, and supposed to be healthy at the time of slaughter, in the second.

The lesions of this malady have a very different distribution when we take account not merely of the animals about which veterinary advice is sought, but of all cases in which tuberculosis in any degree is brought to light by a reasonably careful post-mortem examination. An absolutely certain diagnosis can seldom or never be made by ordinary clinical methods.

Tuberculosis may be acute or chronic, and the former may run its course in a few weeks, while the latter may last for years. At the beginning in the acute form, and for an indefinite length of time in the chronic, the disease process may be confined to one organ, or to one region of the

body, and the symptoms will vary according to the tissue involved.

In all the various forms and seats of the disease, the bacillus may be found in the affected parts. When the lungs are involved in the chronic forms, and the amount of the tissue is not extensive, the animal often presents the general appearance of health, with, perhaps, the exception of a slight cough. The diagnosis of such cases by the ordinary physical method will, as a rule, give negative returns, and suspicion only can be attached to such a case if associated with tuberculous animals. When the lungs become very extensively involved, the symptoms are more distinct and reliable; then the general appearance of the animal will assist. The fact that the lung in tuberculosis consolidates in patches with intervening spaces of normal tissue, will aid one to differentiate from many other forms of lung trouble. In the bovine race, when a certain amount of the lung is diseased, and that not slight by any means, they will gain in flesh, if the digestive system is in a normal state; while, at a point beyond that necessary for the required oxidization of the blood, they will fail; the same clinical fact is seen when the pleura is extensively diseased.

The diagnosis of this disease in the digestive tract is impossible in the early stages by the usual method, and it is only when emaciation, diarrhoea, constipation, and periodic attacks of hoven occur, that one might be justified in condemning the animal, if there are no other associated symptoms.

Occasionally one will see a bovine with chronic hoven; and if associated

with tuberculosis, the post-mortem will often reveal an enlargement of the lymphatics at the cardiac portion of the œsophagus, posterior to the diaphragm.

The different diagnosis of the diseases of the udder is very essential, for it is frequently tuberculous. When simple mastitis is present, you will find a diffused swelling of the quarter affected, which is hot and painful to the touch, the milk changes in its physical appearance and, as a rule, it responds quickly to treatment. When the udder is tuberculous, the swelling is hard and nodulated, and, as has been well said, it feels as though it was full of kernels or seeds, well defined; it is neither hot nor painful, nor does the milk change in a marked degree, although in a short time it becomes poorer in quality while it may increase in quantity. The external or superficial glands, in many instances, will decide the question of this malady. They are larger than normal; nodulated, and those on one side of the body will not correspond in size to the opposite. Tubercles are sometimes found in or under the skin, and are easily felt in the form of well-defined nodules.

The placenta in tuberculous animals is often studded with small, opaque, well-defined new formations. The bones and articulations are not uncommonly attacked, those entering into the formation of the elbow, knee hock, and stifle joints being most often affected. Lameness is very marked in some cases; the joints swollen and tense; the ends of the bones enlarged. The diseased bone may crumble, and sharp spiculæ protrude through the skin. The cerebro-

spinal system is not exempt from its ravages, and tubercular meningitis is not unfrequent. The symptoms will vary according to the location, from excitement to stupor, paralysis, partial or complete. Some animals will walk in a circle for days with the head down and to one side. Young animals not unfrequently die from acute tubercular meningitis. Paraplegia is seen when the lesions are located in the lumbar region of the spinal cord. It is generally acknowledged that the diagnosis of tuberculosis is no simple matter in any stage, especially where one cannot obtain a history of association with tuberculous animals; then how much more difficult must it be in equivocal cases. Instead of depending upon a physical examination or clinical observation to diagnose this malady, use can be made of the microscope, inoculation, or the injection of tuberculin.

The first two methods require special study and considerable time, which is not practical or desirable when a large number of animals are in question, while the third has been demonstrated to be an almost infallible test with proper care and observation. The tuberculin test is based on the fact, as shown by Koch, that it increases the activity of the disease process, creating a general disturbance of the system, which is manifested by an elevation of the temperature. The minute quantity which will not affect a healthy animal, when injected into a slightly tuberculous one will, in from eight to twenty hours, cause a decided rise in temperature. The explanation of this is, that the system contains tuberculin produced by the disease, to which the animal

has become so accustomed that it cannot be detected by any clinical test. When the small amount of tuberculin used for the test is introduced into the circulation, it increases the activity of the disease process, and as a result the temperature of the body is elevated. From this fact it is evident that the quantity of tuberculin to be used ought to vary with each animal, but experiments and observation have demonstrated that for ordinary-sized cows, a certain amount (25 cubic centimetres) can be relied upon for positive results in occult cases. Cases may occur in which the temperature of a cow will rise after the injection of tuberculin and still the animal is not tuberculous. Any febrile disturbance may set in after the injection, such as the period of heat or bulling, close approach to parturition, active exertion, exposure, too hot sun, confinement in a close building, or privation of water.

It is evident from these facts, that only the trained veterinarian should use tuberculin, and he must always be on his guard not to mistake any febrile disturbance that may arise, other than would occur by the use of tuberculin in the tuberculous. Laying aside these and other causes of error in unskilled hands, the elevation of the temperature should not condemn tuberculin, but stimulate a search for occult tubercles, and a failure will be rare.

There are cases where the animal is tuberculous and the injection of tuberculin will not cause any febrile reaction. In such animals the system is saturated with tuberculin, and the small amount injected will not make an impression. These cases are

readily diagnosed by a physical examination. A reaction will take place, even in the slightest case of tuberculosis, by the use of tuberculin, and many of the animals would live for years and might recover. For this reason, when it is desirable to dispose of the diseased animals or to exclude from a herd any that are tuberculous, it is indispensable as a diagnostic agent. When tuberculin is properly prepared, it will not injure a healthy animal. That it will aggravate tuberculosis already in existence is an established fact, and for this reason it has demonstrated its value as a test. Knowing this, it should never be used unless the owner or the government intend to make thorough work of eradicating the diseased animals.

Tuberculosis has been described as a universal panzootic, and from the deaths in the human subject of this disease it can well be termed pandemic. This being evident, prevention is certainly the most rational method of making any inroad into its prevalence.

Fleming, in his "Sanitary Science," 1875, under the heading of "Prevention," says: "The only preventive measures with which we are acquainted are those of a hygienic kind—proper food and water; sufficient exercise in the open air; clean, dry, and well-ventilated but not too cold stables; and keeping the cattle from undue exposure to severe weather. As there is reason to believe that the malady is hereditary, cattle having any tendency to it should not be bred from. As the experiments which have been conducted by most competent authorities have demonstrated that

tuberculosis can be induced in animals by feeding them with tuberculous matter, care must be taken that this is not given to them as food. There being much reason to believe that the disease can be transmitted by cohabitation, whenever cattle show any tendency to it, they should be isolated from the healthy, and every precaution observed with regard to preventing contact. Animals slightly affected, should be fattened and slaughtered; and their flesh, if free from traces of the disease, may be utilized. The milk of such animals should be proscribed, and in advanced cases, the flesh also."

It is readily seen from this quotation that the requirements for protection against the disease, either in man or animals, are the same. It can be concisely stated in the word "hygiene." I doubt if anyone will take exception to the statement that sunlight, combined with cleanliness, proper drainage and ventilation, is necessary to maintain and create a constitution capable of resisting disease. Tuberculosis is an infectious disease, and with the means we have to diagnose this malady, there cannot be any excuse why the products of tuberculous animals should be used for the benefit of man.

In a *brochure* issued by the State Board of Health of Massachusetts (May, 1894), it is admitted that the milk from tuberculous animals is a menace to the health of mankind, and it should be proscribed. In regard to the meat from such animals, they recommend its thorough boiling, although they do not feel confident that it will cause the disease, since clinical evidence to that effect is not

in existence. Since tuberculosis is a preventable disease, undoubtedly there are cases that will recover. This being a fact, why allow or sanction even the use of tuberculous meat, when it is known that the ptomaines or tuberculin which exists in the flesh of tuberculous animals are not destroyed by boiling, and if introduced into the system of a tuberculous individual, will excite the activity of the disease. It is not desirable to ameliorate a case of tuberculosis after the possibility of prevention has passed? It is admitted by the producers of vaccine virus that the bovines that are used for its production should be in a normal condition, and that for this reason they are examined by a veterinarian in some instances, and at other times by a so-called "competent" man.

In an article in the *Boston Medical and Surgical Journal*, May 3, 1894, on the production of vaccine virus, no evidence is shown that tuberculosis is used. Then, of what value can be an opinion as regards the existence of tuberculosis in its occult form? One firm uses mature animals in order that the lymph may be richer in germs, while the other (of the two firms examined) uses young animals that are less liable to be diseased. In neither of these establishments does it appear that the product of each animal is kept by itself, nor that the animals killed are subjected to an examination to establish the fact of their normal condition.

In conclusion, let me congratulate the State Board of Health for its bulletin, as a step in the right direction for the prevention of this, the most universal and insidious of all diseases in the animal kingdom.

BOVINE TUBERCULOSIS IN MASSACHUSETTS.

We offer no apology to our readers for the large amount of space in this issue of the *Journal* devoted to a consideration of bovine tuberculosis. Bovine tuberculosis and human tuberculosis are more intimately related than is generally recognized even by the medical profession, and we believe comparatively few of the medical profession realize the extent of tuberculosis among cattle, or are clear in regard to the value or methods of exhibition of tuberculin as a diagnostic test. It may be that not one of our readers knows what a "bologna cow" is, and yet a considerable commerce exists in that kind of animal.

A month after the meeting of the Massachusetts Veterinary Association which we report, the State Legislature passed an Act of sixty-one sections, entitled, "An Act to Codify and Consolidate the Laws relating to Contagious Diseases among Domestic Cattle." An appropriation of \$25,000 was made to carry out the provisions of this act during the balance of this year.

Under this law the cattle that have been owned in this State six months prior to condemnation are, if condemned by the State Cattle Commission, paid for by the State at half their agreed value, regardless of their tuberculous condition, if the autopsy confirms the fact of infection. If the autopsy shows no disease, the full value of the animal will be paid. In the case of cattle from without the State there is no compensation if disease is proved, but full value is

paid if no disease is shown at the autopsy. The Commission is careful, in every case of condemnation, to establish the value of the animal, either by agreement with the owner or by appraisal, before the animal is killed. There are about 250,000 head of cattle in Massachusetts. If ten per cent. of these are tuberculous, at an average value of \$34 a head, it would cost the State \$425,000 to recompense the owners.

The tuberculin test is used to establish the existence of tuberculosis, and much confidence is felt in it by the Commission. The usual dose is two cubic centimetres of the ten per cent. solution. The cost price of such a dose is about twenty cents. The Commission is using about \$120 worth a week, but the tuberculin is furnished free by the Department of Agriculture in Washington, and is of very reliable quality. The experience of the Commission in the enforcement of the law during one week at Brighton and Watertown would indicate that at least twelve per cent. of the cattle in this State are tuberculous.

We hear of a case tried in the police court in Lowell two weeks ago in regard to the purchase of a cow for two dollars, and the subsequent sale of the carcass to a manufacturer of sausages for two dollars and a-half, one cent a pound.

Inspectors found the cow was riddled with tuberculosis, and could not have lived a month. The following items are taken from the testimony. The original owner, on being asked if he considered the animal fit for food, said the cow was good. The counsel inquired, "Was it a good beef

cow?" "No," answered the owner, "but it was a good 'bologna' cow." It then appeared that the final purchaser manufacturers five thousand pounds of bologna sausage a week, and buys much meat at one cent a pound!

We reproduce a little more of this instructive testimony :

"Do you buy many cows?" was asked of the first purchaser.

"Yes, a good many."

"What do you pay for them?"

"Wall, all prices."

"Do you get many for two dollars?"

"Yes, bologna keows."

"What's a bologna cow?"

"A thin keow; a two-dollar keow."

"Well, where do you get your authority for calling a thin cow a bologna cow?"

"Why, from the keow."

"Would you sell the carcass of a cow that had died?"

"All keows has got ter die. Ef you kill 'em they die."

"Well, would you sell the meat of a cow you call a bologna cow to a butcher?"

"Of course, ef he gave me my price. Ef a man wanted to make a beefsteak out of it, it wouldn't be my business."

"Then you would as soon poison a man with a beefsteak as a bologna sausage; you don't look at the moral aspect?" asked the examiner.

"I don't know what you're talking about."

The Cattle Commission is evidently at work none too soon.

The State of Massachusetts has undertaken, through the Cattle Commission, something which has never been undertaken before. The Com-

mission believes the State can be freed from bovine tuberculosis, and can be kept free. The price is a small one to pay for the accomplishment of such an object, which should be of the very first concern to the medical profession. There will undoubtedly be a strong effort made to turn back to the old conditions. We hope the State will persevere in its present course.—*Ed. Boston Medical and Surgical Journal.*

Progress of Medical Science.

PARAPHIMOSIS, BALANITIS, POSTHITIS AND VEGETATIONS ON PENIS.

By BERNARD E. VAUGHAN, M.D.

Paraphimosis.—This condition exists when there is contraction behind the corona glandis with swelling and œdema of the parts in front, due to the retraction of a narrow prepuce, which the patient is unable to relieve. This condition I have observed in forty-four cases.

Ætiology: The most frequent cause is partial phimosis; the patient retracts the fore-skin and then finds he cannot replace it; also posthitis, with thickening of the prepuce, gonorrhœa with œdema of the parts, Herpes progenitalis, chancres and chancroids.

Two cases had come under my care where a ring had been slipped on the penis and the œdema made removal impossible without filing the ring.

Symptoms: In Paraphimosis the glans penis is swollen and livid. There is a marked sulcus behind the glans, and the parts in front are œdematous.

and much increased in size. The position of this constriction is dependent on the length of the prepuce, as it will be observed at a distance behind the corona equal to the distance of the margin of the prepuce from its attachment to the penis. If the patient is treated at once this is as far as the process goes, but if the case is neglected, and the constriction is sufficiently tight to shut off the circulation, gangrene of the parts in front may set in. (This condition I have never seen.) But, instead, as the swelling increases and the constriction becomes tighter, ulceration begins to take place at the constricted point on the dorsum, and, in this way, the constriction may be overcome by nature. I have seen several cases where there was partial circumcision done in this manner.

Treatment: If seen early, we can usually reduce the condition without much difficulty, by patience. I exert firm and steady pressure for several minutes to the whole penis; by this means the fluid is driven out of the swollen parts and the organ is diminished in size. Then, with the left thumb and index finger, I grasp the penis behind the constriction, and, with the thumb and fingers of the right hand, I force the fluid out of the glans by firm and steady pressure; this reduces its size very much, and it then usually slips beneath the constriction. If, by this method, and without causing much pain to the patient, I fail to reduce it, I inject cocaine and divide the constriction; with a case of short prepuce, I slit up the skin and mucous membrane evenly to the sulcus, or, if the prepuce is long, I circumcise the patient at once.

Where there are venereal lesions, the

relief of the phimosis should not be neglected, and if there are no venereal lesions, it is a good time to obtain the patient's consent to a circumcision, which will prevent recurrence of the trouble. At no time, on account of the œdematous condition of the parts, have I had trouble with the healing.

The cases where chancre of the prepuce, near sulcus, causes eversion of the prepuce and slight constriction, we can, while treating the sore, relieve the constriction by a well-fitting bandage.

Balano-Posthitis.—By Balanitis, we mean inflammation of the glans penis, and by Posthitis, we mean inflammation of the inner surface of the prepuce. These conditions are usually associated. Consequently, it is better to treat of this condition under the name of Balano-Posthitis.

During the four and a half years at the New York Dispensary, I treated 616 cases of this affection.

Ætiology: Phimosis, associated with uncleanliness, especially uncleanly coitus, gonorrhœa, chancres and chancroids, Herpes' progenitalis, glycosuria and gouty habit.

Symptoms: The glans penis and the interior of the prepuce become reddened, mottled and moist. The epithelium comes off, producing excoriations. There is, in some cases, considerable production of pus. The patient complains of pain and itching at the end of the penis, and there is, sometimes, a reddening of the mucous membrane of the urethra at the meatus, with a discharge of pus, without gonorrhœa. If this process is acute, we get swelling of the prepuce and acute phimosis. In chronic cases, we get a thickening of the prepuce and retrac-

tion is impossible. Sometimes the mucous membrane is very thick, and the discharge from the prepuce fetid and virulent. If this pus is examined, we find bacilli and micrococci, the former in great numbers.

Diagnosis: This is principally made to determine the cause, the condition being self-evident.

Gonorrhœa of the glans is unusual, but when there is a profuse discharge and a long prepuce, the parts are irritated by the exposure to the gonorrhœal pus. We may mistake balanoposthitis for gonorrhœa, unless we examine carefully, when we have to deal with a long prepuce. We must retract the parts. Clean with cotton, and then, on squeezing the meatus, we find discharge from the urethra containing the gonococci. If we cannot retract the prepuce, we must syringe it out with water, and, when clean, have the patient urinate in a glass vessel. If the urine contains pus, the urethra is involved. The presence of the gonococci in the discharge also proves the presence of the urethritis.

In chancroids the ulcers are deeper, and there is more frequent involvement of the inguinal glands, although we may have bubo in both conditions.

Chancre can be distinguished by the circumscribed lesion, induration, the character of the glandular involvement and the appearance of the sequellæ.

Herpes' progenerialis can only be distinguished in the vesicular state, for as soon as the vesicles rupture there is the same eroded appearance as in simple balanitis.

Treatment: Simple variety—Careful attention to cleanliness, frequent washing with soap and water, and the application of some inert powder.

One of the best local applications consists of boric acid, calomel and bismuth, equal parts, dusted on, and a thin layer of absorbent cotton applied between the prepuce and glans.

For a lotion, either *lotio nigra*, or, preferably, *lotio rubra* (zinc sulphate grn. v, comp. sp. lavendulæ ½ drachm and water 2 oz.), may be employed. A thin layer of cotton is moistened with this lotion and placed on the glans, and the skin drawn over it. In the case of patients treated in dispensary practice, where they are obliged to dress themselves, I prefer lotions to powders, as they are able to keep the parts cleaner with the use of the former. When gonorrhœa, or other venereal condition exists, it should receive the proper treatment. In some cases which have been circumcised, we have bands of adhesions to the glans bridging over the sulcus; the part beneath is very likely to be the seat of the inflammation. In these cases the bands should be divided. If the prepuce is much inflamed rest, position and evaporative lotions must be used in addition to the other measures. It may be necessary to slit up the prepuce on the dorsum, in order to relieve the phimosis produced by this condition. Adhesion of the prepuce to the glans is rare after adult age is reached, but, should it occur, it must be relieved. The question of circumcision must always be considered in these cases, and if the condition is of long standing or recurrent I invariably advise the operation.

When the patient is gouty, or there is glycosuria, besides giving the local treatment, we must treat the general condition.

Vegetations on Penis.—The number of cases observed at the dispensary was 130.

Vegetations on the penis are spoken of as venereal warts, but there is no necessary relation between them and venereal disease. They are usually multiple, and may be pedunculated or flat. They are caused by the presence of irritating fluids, or by simple lack of cleanliness; consequently they are usually associated with gonorrhœa or balanitis.

Their usual seat is behind the corona glandis, on the inner surface of the prepuce and at the meatus. They may be few in number and small, or large and numerous. Besides the uncleanliness and annoyance, their greatest danger consists in their possible change to malignant growth in the aged.

Treatment: Circumcision, with the removal of the wart-producing surface. If that is not practicable, use of the galvanic cautery after the warts have been removed with scissors, or the use of nitric acid, followed by drying powders; *e.g.*, equal parts of boric acid, bismuth and calomel. If the warts are flat, we may apply corrosive sublimate, 1 drachm, to collodion, 1 oz.—*American Medico-Surgical Bulletin.*

ICE-COLD APPLICATIONS IN ACUTE PNEUMONIA.

Prof. Mays, in *College and Clinical Record*, says one of two views will govern the physician in applying this remedy. "He believes in the constitutional nature of the disease, and especially if he thinks that the high fever endangers the integrity of the heart-

muscle, his principal aim is to reduce the fever at large, and to accomplish this he immerses his patient periodically in a cold bath, which is done by Jürgensen and others. If he holds that the local trouble in the lung is responsible for the high fever, and that this constitutes the vulnerable point in the disease, he will pay less attention to the general condition and make his cold applications directly over the inflamed lung.

"I believe that much of the ill-success which has followed the use of cold in pneumonia is attributable to the fact that it was employed according to the first method. The pyrexia of pneumonia is not the same as that of typhoid fever, or at least it does not yield to cold in the same way as that of the latter does. The former is best subdued by cold being applied directly over the affected lung as well as to the head, and general baths or spongings do not seem to be essentially indicated, and if the latter are applied they do not keep the fever down for any long period. If the fever and a great deal of the constitutional disturbance of pneumonia depends on the inflammatory process in the lung, then an abatement of the pulmonary disorder will strike at the very root of the difficulty, and it is clear, too, that the measure which accomplishes this must be applied continuously and persistently, and not like in typhoid fever, at stated intervals. Moreover, it is a hazardous procedure to subject a pneumonic patient to the bodily changes and cardiac strain which are incidental to the giving of a general bath. It must be remembered that the heart is always implicated in pneumonia, and

is therefore a weak and easily assailed organ.

"How, then, is the cold to be applied, and how long must it be continued? The affected area must be surrounded with ice contained in bags, which are wrapped in towels. If the disease is confined to the front base on one side, one good-sized bag will suffice; but if the exudation extends to the side and back, then at least one more bag must be applied laterally and as far back as possible. If the affection is extensive, put on as many ice-bags as are necessary to cover the whole area. Watch the morbid process, for it is very apt to migrate from one spot in the chest to another, and if it does so follow it up with the ice-bag.

"The length of time for which cold is to be used must, in most cases, be decided by the amount of fever which is present. If this falls to or near the normal point, and shows a tendency to remain there, then the ice may be gradually removed. It is best, however, not to be in too much haste in withdrawing the cold, for frequently before this is off very long the temperature suddenly flies up again. If this takes place, and the temperature remains high after the ice is reapplied for some time, it is a possible indication that the inflammation has invaded a new field, and is not active in the old one. This has happened several times in my experience.

"It must always be borne in mind, however, that the ice is not solely employed for the purpose of reducing the fever, but rather with the object of circumventing the exudative process and of hastening resolution in the affected part. There may be very

little fever present in some cases of pneumonia, as in the aged, yet the destructive changes are going on in the lungs at a rapid rate. In senile and latent pneumonia, the activity with which the ice is employed must be governed entirely by the impression which is made on the pulmonary disintegration. This must be the objective point and not the temperatures."

He then goes on to say that if the temperature remains about 104° to 105° prognosis is favourable, provided other conditions are equal, he has used this treatment in both croupous and acute catarrhal pneumonia with success. In regard to the heart, he says: "That the heart's function is impaired no one will, I think, deny. Indeed, this could not be otherwise, for the heart and lungs have a common nerve supply, are bound closely together by the pulmonary blood-current, and whatever invalidates one must also affect the other; but I believe that the doctrine that pneumonia becomes fatal because the heart is unequal to the work of forcing the blood through the engorged lungs, and all that we are required to do is to stimulate and to goad this organ, unmindful of what is going on in the lungs, is as imaginary in its conception as it is fatal in its practice."

A NEW QUESTION IN MEDICAL JURISPRUDENCE.

By JOHN M. CURRIER, M.D., Newport, Vt.

On the 24th day of November, 1893, Isaac Miles, of Greensboro' Bend, Vt., disappeared, and was never again seen alive. He was last seen in company with Jas. Bow, night-watchman at the

steamsawmill, and Abner G. Cram who was hanging around the engine-room of the mill. On April 24th, 1894, the body of Miles was found under a pile of boards near the mill, with his skull extensively fractured; one of his malar bones was also fractured. At the trial the defence raised the question: Could the freezing of the brain during the winter cause expansion enough to fracture the skull? Expert testimony was introduced with the view to establish this point sufficiently to throw a doubt in the minds of the jurors. The State, anticipating that this question would be raised, had several physicians summoned to testify against it. In the defence it was claimed that the head was driven into the ground sufficiently far so that the expanding earth would fracture the skull and malar-bone by force from without inward. This was a point well enough for the defence to make for the purpose of befogging a jury, but not very logical. If the brain would expand in freezing sufficiently to fracture the skull, the force from within outward would be counterbalanced by the freezing earth from without inward. None of the physicians who testified had ever seen a case of freezing of the brain or ever made an autopsy of one that had been frozen; consequently they could not testify from experience. The usual cross-questioning by the opposing counsel was made with the view solely of making the expert witnesses appear as ignorant and inefficient as possible, instead of eliciting the truth. One question that was asked by the counsel for the State of the medical witness called by the defence that should have been ruled out as an insult, was: If a man's head was cut

off, would he die? Such question do no honor to the legal profession and their answers do not detract from the dignity of the medical profession. They must appear to the jurymen as trifling. Will the brain of man or any animal expand enough from freezing to fracture the skull or cause separation of the sutures? I have seen the skulls of animals that died in the winter months and were thrown out and exposed to very low temperatures, but none of them was ever fractured by the expansion of the brain. I will relate one case that came under my observation in the town of Bath, N.H., in February, 1855, that comes directly to the point in this case. I was stopping with my brother one very cold day, when between two and three o'clock in the afternoon a drunken tramp, by the name of "Bart" Somers, called with a jug of rum. He took another "swig" from the jug and left the house before three o'clock; he went about eighty rods, sat down by the side of the road, took another "swig," according to indications, leaned over and took his "last sleep." The body was not found till the next day at eleven o'clock in the forenoon. It was frozen so stiff that none of the limbs could be flexed or extended. The thermometer registered not less than 28° below zero during the whole night. The body was thus exposed to that low temperature about twenty hours. An inquest was held by the authorities and a thorough examination of the body was made. There was no fracture of the skull nor separation of the sutures to be found. This case proves conclusively that the freezing of the brain cannot produce a fracture of the skull.

TREATMENT OF PUERPERAL
SEPTICÆMIA.

Madden writes for the *Medical Press and Circular* of June 27, 1894, on this subject.

Prophylaxis depends upon dietetic and hygienic conditions previous to confinement, and absolute asepsis during labor. He very strongly believes in vaginal irrigations at commencement and just before delivery. These may be either carbolic (1 in 40), boric acid (1 in 25) or lysol (1 in 100). Condemns bi-chloride as a uterine irrigant. After completion, more especially if instruments have been used, thoroughly flush both uterus and vagina with hot boric or carbolic solution, or peroxide of hydrogen. Never use a syringe in any form, always the irrigator.

Although the prevention rather than the treatment of puerperal septicæmia is the object to which the obstetrician may most profitably direct his attention, the latter subject cannot be here omitted from consideration, and must be chiefly guided by the special type of the disease, as well as by the predominant symptoms and condition of the patient in each and every instance. In the now more prevalent typhoid form of puerperal fever, the disease is distinctly of a remittent character, as shown in several clinical charts exhibited. For its treatment, free stimulation, suitable nutrition, and strict asepsis by local irrigation of the urethro-genital tract are essential; while, in the way of medicine, there are only three drugs which appear to the writer as possessing any approach to specific remedial or germicidal action in such

cases,—viz., quinine, sulphurous acid and turpentine.

In all cases of puerperal fever in which the use of rectified spirits of turpentine may be tolerated by the stomach and bowels, the writer believes that no other remedy is of such general utility as this, the efficacy of which (like so many other obstetric ideas, the credit of which has been given to modern foreign authorities) was originally demonstrated in Dublin by a long-forgotten Irish practitioner, Dr. Brennan, upwards of eighty years ago. The remedial action of turpentine in appropriate cases of puerperal fever the author has proved, and ascribes to the probable germicidal potency of the drug no less than to the effect of a powerful stimulant. Besides, there are other agents available in accordance with the special symptoms and stage of the disease and condition of the patient in each case, which need not be referred to, as their employment must obviously be directed by the broad principles of general therapeutics. In the earlier stage of puerperal fever no remedy has afforded such advantage in reducing temperature and pulse-rate, unlocking pent-up lochial and mammary secretions, inducing sleep and tranquilizing the patient, as phenazone (antipyrin) in small and repeated doses. The effects thus produced are, however, too frequently but temporary, and in the latter stages of puerperal septicæmia, or where from the first the intensity of the puerperal septicæmic intoxication and consequent prostration are most marked, then, it is almost needless to add, antipyrin is distinctly contra-indicated.

LIABILITY FOR DELAY IN TRANSPORTING MEDICINE. — Physicians have frequently to send medicines to patients by what the law term common carriers. Suppose these public servants are remiss in the performance of their duties, does anyone have a legal redress? For example, a Texas doctor prescribed, and directed a druggist to send medicine by express, for a woman lying seriously sick near another railway station. The medicine was delivered by the druggist's clerk to an employé of the railway company, to be carried by express, the latter being informed of the nature of the package and the importance of its being sent on by the next train. The railway employé gave the package to the regular agent of the express company, telling him it was to go on the train that night, but without informing him of the nature of its contents. The package, however, was not sent until the next day evening. The sick woman's sufferings, it was proved in an action brought to recover damages from the express company, were increased by the failure of arrival of the medicine, and that the medicine would have relieved her; and the testimony tended to show that in consequence of its non-arrival she grew worse, and had a long spell of sickness, requiring medical attention, and expenses for a physician, who attended her afterwards for nearly three months. The case was tried by the court without a jury, and judgment rendered for the woman's husband, who it was that sued the express company, for \$300 for physical pain and mental suffering of his wife, \$25 for his own mental suffering, and \$40 for medical bill;

making \$365 in all. Under these circumstances, the Court of Civil Appeals of Texas holds, in a decision rendered October 10th, 1894 (*Pacific Express Company v. Black*), that the employé of the railway company was so held out by the express company as its agent as that his agency might be implied by persons dealing with him as such, and that the fact that no receipt was given, and no written contract made to ship the package, would not prevent a recovery, if it was accepted for shipment. There was testimony before the court, in this case, from which it might be implied that the employé of the railway company was the agent of the express company to receive the package for shipment. He was notified of the fact that the package contained medicine for the woman who was sick, and that it was important that it should be sent on the next train. This, it is held, was notice to the company, rendering it liable for the injury occasioned by its neglect in forwarding the package with reasonable despatch. Injury, both physical and mental, was shown to have resulted to the woman by the neglect of the company in delaying the shipment; and, the court declares, it must be held her husband was entitled to recover for such injury. It was not error to admit evidence showing the physical and mental suffering of the woman as the result of the failure of the express company to forward the medicine in reasonable time. But the sympathetic mental sufferings of the husband on account of the suffering and pain of the wife in prolonged labour, caused by the company's failure to deliver the medicine were too

remote and consequential. His wife was the direct sufferer, which caused him anxiety and alarm. Her injuries were the proximate result of the default of the company. To allow a recovery for the mental anxiety of the husband on account of the wife's increased suffering, either mental or physical, would be to allow a double recovery for the same cause of action. The trial court should, therefore, not have allowed the \$25 for the husband's injury. Nor was it correct to allow the amount of the medical bill due to the physician attending the woman in her long sickness. It was too remote, and could not have been in contemplation of the parties. The judgment was, on these grounds, reversed as to the amounts allowed to the husband on his individual account and the medical bill, but affirmed as to the amount allowed for the suffering of his wife.

PELVIC EXUDATE.—In a series of papers with the above title, Professor Birnbaum closes with the following therapy (*Der Frauenarzt*): The best prophylaxis is a thorough antiseptic handling of each childbirth, each operation, or other manipulation of the genitalia. The special treatment is necessarily local, since the fever and constitutional symptoms are dependent upon the local process. Of prime importance is the removal of irritation or anything causing congestive changes, or which obstructs the backward flow of blood, and avoiding unnecessary movements or internal examinations. So long as fever and pain denote continuance of inflammation, cold compresses, ice bags, or water of moderate temperature are employed

to counteract it. Kisch recommends for the acute stage intravaginal applications of cold by means of a special irrigator. For plethoric patients blood-letting is recommended early in the child-birth by applying from six to ten leeches in the inguinal region of the affected side. Not so strongly recommended is the use of leeches to the vaginal wall, owing to the irritation and the danger of infection. The ice-bag is used only so long as the pain continues; then water compresses (22° to 25° C.) are resorted to, which may be continued for hours, under which treatment the absorption often goes on to completion. The much-lauded use of unguent. cinereum, or ointment of potassium iodide, has yielded less prompt results than the water applications. Where foul-smelling lochia are present, the vagina is washed out many times a day with sublimate (one-tenth per cent.) or carbolic acid solutions (one to two per cent.) For the fever, when it is very high and persistent, large doses of cinchona, anti-pyrin (cautiously), sodium salicylate, digitalis with acid, and the like drugs are employed. If, in spite of this, the exudate goes to pus formation, it is still possible to have absorption by the use of compresses. But when the continued high fever denotes the presence of pus, then drainage of the collection is required. When there is a tendency to point externally, applications of flaxseed poultices, etc., are made. When fluctuation is detected, an incision is made above Poupart's ligament, from one to two centimetres, and two to three centimetres from the anterior superior iliac spine. When fluctuation is not positive, exploratory puncture is recommended. From the

rectal region it is more difficult to remove the collection, but exploratory puncture may also be tried through the vagina. After opening in this situation, it is well to employ drainage. When the abscess breaks into the rectum or bladder, without sufficient drainage, Byford recommends inserting a sound through the abscess opening, turning the point against the vaginal wall and cutting against the point of the sound. If the exudate does not go on to pustulation, then iodine, internally as well as externally, is employed. Painting with tincture of iodine, inunctions of iodine, and potassium iodide ointment, or the rubbing of potassium iodide and lanolin into the abdominal wall. Painting the cervix and vaginal mucous membranes with the tincture of iodine, or with iodine and glycerin, followed by dusting with iodoform is also advised. In anæmic patients the use of iodine must be guarded. After iodine, cold, lukewarm, or hot irrigations, with or without addition of medicaments, are recommended. The use of massage is recommended with caution, suppuration contra-indicating this. Electricity has not proved a success. Mercury as inunction and internally is used where gonorrhœal cause is suspected. Naturally, in each case good diet, iron, quinine, wine, and similar tonics must be used, and the patient must not be allowed to leave her bed too early.

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CHLORAL HYDRATE—SOME OF ITS LITTLE KNOWN THERAPEUTIC EFFECTS.—Chloral hydrate, Dr. V. De Holstein (*Sem. Méd.*), as is known, is almost exclusively employed as a hypnotic and sedative; but it also possesses the power of relaxing spas-

modically contracted unstriated muscles, and is a powerful dilator of the peripheral vessels, though these two properties of chloral are as yet but seldom taken advantage of by practitioners. Lately, however, chloral hydrate has been utilized in these capacities by Drs. P. P. von Robitansky and J. Pal. The former employs the drug, associated with iodide of potassium, in the treatment of bronchial asthma; while the latter has met with considerable success in resorting to enemata of from one to one and a half grammes (fifteen to twenty-three grains) of chloral for combatting hæmoptysis, a condition in which it is assumed that this remedy exerts a beneficial influence, especially by the revulsion which it produces in dilating the cutaneous vessels. Another physician, who is in the habit of employing chloral hydrate as a vaso-dilating agent, is Dr. L. M. Cherchevsky, who combines this medicament with potassium iodide in the treatment of aortic neurism. He has found that chloral, in doses of fifteen to twenty centigrammes (two to three grains), several times a day, is of great assistance to the action of the iodide, in that it keeps up a certain degree of relaxation in the peripheral vessels. Dr. Cherchevsky also frequently resorts to chloral hydrate, in small doses several times daily, to counteract the coldness of the feet and hands, which is so disagreeable a symptom in certain cases of anæmia, chloro-anæmia, and neuropathy. In the experience of Dr. De Holstein, of Paris, chloral hydrate appears also to be an excellent remedy in the chronic constipation frequently occurring in certain

neuropathic patients, which is extremely rebellious to the usual methods of treatment. The average dose of chloral hydrate, when employed as a laxative, is one and a half grammes (twenty-three grains), which should be taken when going to bed in the evening. The effect is frequently maintained for several days, and is the same, generally speaking, as that of atropine, though with the difference that it is more rapid and seems to be more certain and more powerful than that of the preparations of belladonna. Like all other medical substances employed as laxatives, chloral should be prescribed only from time to time, in order not to accustom the patient to it, and thus avoid the ill-effects which may be brought about by a long-continued use of this drug. It is self-evident, that contra-indications to the use of chloral, foremost among which is the existence of a cardiac affection, must also be taken into account. Apart from this contra-indication, which is of capital importance, two others should also be kept in mind: rosacea, or a tendency to this affection, and hysteria of a grave nature. Chloral, in fact, easily produces congestion of the face, and thus favors the production of rosaceous hyperæmia; on the other hand, in hysterical patients it may determine paroxysms of delirium and hallucinations.

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THE URINE IN TYPHOID FEVER.—
(*The Hosp.*, per *American Medico-Surgical Bulletin*). After twelve years' trial of the Ehrlich test it is possible to form some idea of its efficacy. Several observers have tried it in numerous

cases of persons suffering from all sorts of diseases.

Hewetson, working in Prof. Osler's clinic, looked for the reaction in 196 cases, and found it in 136; but he remarks that it is very highly probable that the reaction would have been found in a larger proportion of cases if it had been possible to test them during the whole of the illness. Of fifty cases, which were very carefully observed, the reaction was present in seventy-seven per cent. during the first week, in sixty-seven per cent. during the second, in forty-seven per cent. during the third, and in seventeen per cent. during the fourth. Its duration varied very much; sometimes it only lasted a few days. It might be met with during a relapse, and it might persist during the whole of an attack. It was found, in very many other cases, chiefly tuberculosis, measles, scarlet fever and pneumonia. Actually thirty-four per cent. of the cases of tubercle showed it, and it was very commonly present in acute miliary tuberculosis.

On the whole, we may conclude that it has very little diagnostic value. Another point which has also received much attention lately, is the toxic property of the urine of patients suffering from typhoid. It is well known that healthy urine is toxic, and Roque and Weill, investigating the urine of typhoid patients in whom no treatment was adopted, find that the toxicity of the urine is much increased, being double that of health but that this poisonous property of the urine is independent of the temperature, and remains increased during the whole of the fever, and also during the first part of convalescence. With

regard to the cases in which antipyrin was used, they come to the conclusion that the drug appears to act as an antiseptic, the urine loses all its toxicity without there being any evidence of the retention of toxic bodies in the system, but when the drug is stopped the toxic bodies again appear in the urine, and are excreted in large quantities during convalescence. Patients treated with cold baths excrete enormous quantities of toxins during the cold bath treatment, but proportionately less during convalescence. These results are very interesting, and may, in part, explain the good results that have been derived from the cold bath treatment.

With regard to this question of toxins in the urine, it is interesting to note that the importance of getting rid of toxins from the body is gradually becoming well known. Lauder-Brunton and Mr. Watson Cheyne give an account of a case in which the evacuation of toxins from the intestine in a case of intestinal obstruction quickly led to marked improvement, and Dr. Hale White relates a case in which the evacuation of a quantity of faecal pus from the pleural cavity led instantly to a great improvement in the patient's general condition, and the increased strength of the pulse was very noteworthy.

THE TOXIC POWER OF THE MILK OF TUBERCULOUS COWS — ANTI-TOXIN TREATMENT FROM GOATS' MILK.—(Dr. Pasquale De Michele, *Gazz. degli Osped.*). The author's researches are of importance, having been conducted in a somewhat different direction to that hitherto followed. The cows experimented

upon were recognized as tubercular, but only those were selected which presented no evidence of mammary tuberculosis, and in which the milk contained no bacilli. No bacilli were found in the milk, even when examined but a few hours after the injection of large quantities of tubercle bacilli, a fact tending to prove the statements of Flugge and Wyssokowitch, to the effect that there is no passage of organized virus within the milk when the udders are free from tubercular lesions.

The author found that in the case of female rabbits that were tubercular, the young suckled by them die of marasmus, a termination also noted when the milk is injected subcutaneously to young guinea-pigs. These deaths must be attributed to the presence, within the milk, of the toxic elements of the micro-organism, confirming the researches of Maffucci, and showing that the gastric juice is altogether unable to destroy the toxic power of these products. It seems, therefore, definitely proved that the milk of tuberculous cows, even when containing no bacilli, must needs possess a power for evil that is very great.

[It is interesting to note that the question as to the passage of tubercle bacilli in the milk of cows without the presence of tubercular lesions of the udder is still subjudice. It must, in the first place, be remembered that tubercular lesions of the udder may exist without being amenable to physical inspection. They are at times so small as to escape the most careful digital investigation, and are only revealed at the autopsy. While the researches of the Bureau of Agri-

culture of the United States tend to show that bacilli may pass in the milk while the udders are in a state of integrity, the often almost microscopical nature of the lesions is a source of possible error. It is quite certain that the milk of markedly tuberculous cows often fails to show the presence of bacilli; this, with the careful researches of De Michele and of the two authors above mentioned, would seem to show that the weight of evidence is in favour of their assertion.—*Editor American Medico-Surgical Bulletin.*]

[In striking confirmation of the deleterious influence of milk of tuberculous cows, though no bacilli are present, comes the fact that the anti-toxin for diphtheria is now prepared from the milk of immunised goats.—
ED. D. M. M.]

The difference in the manner in which medical experts are treated by corporation lawyers and a great constitutional legal authority, is excellently illustrated in the difference between the account given of the Cowper trial by Mr. Godkin ("Hamilton's Jurisprudence") and that of Macaulay (History Vol. V., p. 449).

Godkin says :

A considerable number of physicians were called by the prosecution and defence to establish or controvert this proposition: That "it is contrary to nature, that any persons that drown themselves should float upon the water; we have sufficient evidence that it is a thing that never was; if persons come alive into the water, then they sink, if dead

then they swim," The judge who presided at the trial made some remarks on medical testimony in the course of his charge to the jury which have a decided resemblance to some of the reflections which are made to-day by judges charging the jury upon the merits of the same kind of evidence.

after death. To prove this doctrine the prosecution called medical practitioners, of whom nothing is now known except that they had been active at elections. To confirm their evidence sailors were put in the witness box. On the other side appeared an array of men of science, whose names are still remembered. Among them were William Cowper, the most celebrated anatomist that England had then produced. He was indeed the founder of a dynasty the most illustrious in the history of science; for he was a teacher of Cheselden, and Wm. Cheselden was the teacher of John Hunter. On the same side appeared Samuel Garth, who, among the physicians of the capital, had no rival, except Radcliffe and Hans Sloane, the founder of the magnificent museum. The attempt of the prosecution to make the superstitions of the fore-castle evidence, for the purpose of taking away the lives of men, was treated by these philosophers with just disdain. The stupid judge asked Garth what he could say in answer to the testimony of the seamen. "My Lord," replied Garth, "I say that they are mistaken. I will find seamen in abundance to swear that they have known whistling raises the wind."

The great lawyer and historian, permeated by the broad scientific spirit of the common law, takes no stock in the dicta of judges; and

separates the man of science from the medical politician. The corporation lawyer worships judicial infallibility and condemns medical science, by placing in the same category the stars of the galaxy of British science and unknown 17th century medical politicians, testifying in behalf of an, even then, exploded superstition in order to hang, in obedience to mob clamour and judicial demagoguery, an innocent man. As in our day the demagogue judge sacrificed the man of science and glorified the political charlatan.—*Medical Standard.*

BICYCLE EXERCISE FOR WOMEN.

—Dr. Laura Liebhart states (*Woman's Medical Journal*), regarding bicycle exercise for women, that "the majority ride with the saddle too low," and that this is responsible for cramping of the chest, straining the back, and impeding full action of the muscles of the leg. There results a constant tension of the muscles above the knee, which gives a short, awkward stroke, as the reach is too short. The seat should be amply high for the entire leg to be extended, and give to these muscles a second of relaxation on the downward stroke of the pedal. The knee must have perfect freedom, and in this respect a woman finds herself particularly handicapped, as she is unable to make the entire stroke with the action of the knee limited by a dress skirt. In Paris they do not stop with the unsightly bloomers, but have almost universally adopted the practical, yet far too radical, knickerbockers. This striking costume attracts but a passing notice, for the rationale of it all appeals to the French mind; but, as the United

States has fortunately not yet reached the Parisian standard, it is to be hoped that knickerbockers will confine themselves to spins in the mountains. Wheelwomen also subject themselves to needless jars by jumping instead of gliding from the wheel. They should be taught to mount and dismount from either side as men are wont to do. Corsets on the wheel, as elsewhere, should be denounced in the strongest terms, although nearly one-half of all wheelwoman tie up their muscles in this barbaric fashion. Many condemn cycling on the ground that the movements are identical with those called forth in running a sewing machine. Machine running stimulates more the faulty way of wheeling, and the position is almost identical with that assumed when the handle bars and saddle are placed too low. In wheeling there are a greater variety of movements and less tension. Two-thirds of all women who ride wheels foolishly incur great risks by riding during certain periods, even to the extent of hill climbing, when they should never mount a wheel, except for short distances, during the first two days. During the Nebraska discussion general opinion was that the saddles in use were hardly proper. The long, wide saddle suspended between springs was considered very much superior to the rigid or hard models. A saddle much wider throughout was considered desirable, and cases were quoted to substantiate this claim.

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Bismuth, silver nitrate and lead acetate are not only astringents, but also sedatives; all other astringents are irritants.

Dominion Medical Monthly.

All literary communications, exchanges, and books for review, should be addressed to the DOMINION MEDICAL MONTHLY Editor, 97 Confederation Life Building, Toronto.

- *Address all business communications to the Publishers, THE MEDICAL PUBLISHING CO., OF TORONTO, Rooms 97, 98, 99 Confederation Life Building, Toronto, Canada.*

TORONTO, DECEMBER, 1894.

OURSELVES.

With our next issue we will complete changes in connection with the MONTHLY editorially and otherwise, the result of which will be that we will give the profession the only truly, fair and independent paper in Canada; a journal interested in neither schools, cliques, councils or anti-councils; a journal which will not be in existence to advertise the views of any clique or set of men, but to uphold and support all that is good and progressive in the profession, and endeavour to improve that which is faulty and retrogressive.

The matter which the MONTHLY will contain in the future will consist, in the first instance, of original papers, which will not be merely the condensation or elaboration of views already expressed in various text-books and medical journals; but our strongest feature will be the concise *reviews* of all subjects of interest to the general practitioner in current medical literature. Practitioners will also find an Alphabetical Index of Diseases, from issue to issue, which will contain

the ideas of treatment up to date, as laid down by the most eminent men in the largest medical centres of the world.

Another important point that must not be overlooked, in the present state of medicine, is its relation to advanced science in the departments of chemistry and biology.

So rapidly has medicine progressed in this particular that it requires men of thorough scientific training to present the results of research in their lines. The more scientific phases of medicine will, therefore, receive much more justice in the future in the MONTHLY *than in the past.*

WHAT IS THE SAFE DOSE OF ANTIPYRIN?

Dr. H. A. Hare, in an editorial in the *Therapeutic Gazette*, discusses very fully the safe dose of antipyrin. He considers that the susceptibility is a more powerful factor than the dose of the drug, and says:

"In view of this susceptibility, and in view of the uncertainty which, to a certain extent, exists even at the present day as to the best moderate dose of antipyrin, we may conclude that five grains three times a day is quite sufficient as a beginning dose in the vast majority of cases, that in a fair proportion of instances even smaller quantities will be equally beneficial, and that it is exceedingly doubtful whether doses of more than forty-five grains a day can be taken without danger to the patient's organism. This is particularly so in view of the fact that the production of chronic poisoning by such doses in the lower animals has been shown to be followed by slow degenerative

changes in the kidneys, liver and spleen."

Such statements from so eminent an authority in therapeutics as Dr. Hare, should be sufficient to make practitioner, put forth every effort to stop the wholesale use of this drug by the people. When one considers the harm done, not only by this but by numerous other drugs when unintelligently used, what a travesty of justice it is to say that the prescription is the patient's property, and how the divine rights of the people suffer because we object to the druggist passing pounds of this stuff over the counter with no check but his own sweet will or his customers' purse.

"INDEX MEDICUS."

We are in receipt of a communication from Mr. Geo. F. Davis, publisher of this valuable periodical, in which he says, that owing to the falling off of subscriptions and other causes, the publication of this journal, which has always been conducted at a financial loss, must be suspended unless the profession extend to it a more generous support. We sincerely hope that he will have, at least, no cause for complaint from Canada. A work so valuable in all its features has never been attempted for any profession, and we are at least fortunate in having the number of volumes that we already have of the *Index*. Surely there are some men in each of our cities who are sufficiently interested in original work to make the *Index* valuable to them. It matters not what subject a physician may care to keep posted in, he finds in the *Index* a record of all the current literature

carefully tabulated and arranged under their different headings. When we consider the brilliant results of original investigation and of foreign medical success, which are being presented daily to our notice, it would certainly indicate that our own physicians are lacking in the true scientific spirit when publications like the *Index Medicus* are allowed to cease.

We would ask all those at all interested in original research to forward their names to Mr. Davis at once.

THE TREATMENT OF ENLARGED PROSTATE BY REMOVAL OF THE TESTES.

Although only twelve cases have been so far reported of treatment of enlarged prostate by castration, the result obtained would seem to indicate that the operation will be generally adopted in severe cases.

The two latest reports are by C. R. Meyer and F. Haenel, of Dresden, and C. Mansell-Moullin, of London. The Meyer and Haenel case was that of a man seventy years old, suffering from hypertrophy of prostate, with severe cystitis. The prostate as felt from the rectum, was as large as a man's fist. Under palliative treatment the symptoms remained unchanged. There was almost complete insufficiency of the bladder. As a last resort castration was proposed, and willingly accepted by the patient. Both testes were removed, and the wound healed without accident.

Within a few days after the operation frequency of micturition was considerably diminished, and catheterization was markedly easier. The

bladder insufficiency kept up for two weeks, but then power steadily improved. Forty days after operation the condition was as follows:— Prostate was of normal size and normal feel to palpating finger; bladder completely emptied at intervals of four or five hours, without catheter, and with no after dribbling. Urine shows no pathological constituents, and patient's condition excellent.

Mansell-Moullins patient was eighty-one years old, general health good, and was admitted to London Hosgital suffering from retention. Catheterization was attempted unsuccessfully, and aspiration of bladder above pubes had to be resorted to. The prostate in this case was as large as an orange, smooth and hard. As supra-pubic prostatectomy was considered too dangerous, castration was determined upon.

Ten days after operation the prostate was distinctly smaller, and three weeks after had practically disappeared. The finger introduced into rectum, felt only a fusiform thickening along the catheter, the bladder regained power, and the urine became acid.

BOVINE TUBERCULOSIS.

As the *Boston Medical and Surgical Journal* says: We offer no apology for the space devoted in this issue to articles on Bovine Tuberculosis, and we purpose in the next issue to give a couple of articles which have appeared in the *Boston Medical and Surgical Journal* on the same subject.

There is no doubt it is one which is growing daily in interest. Extracts, which also appear, show that the milk of tuberculous cows contains,

if not tubercle bacilli, at least the products of their action on the organism. And we find that anti-toxin for diphtheria is being prepared from the milk of immunised goats. In fact, the testimony, to the harmful character of both the milk and meat of diseased animals is being added to at such a rate that it is impossible for any class of men interested in sanitary measures, as physicians are supposed to be, or for any government, which pretends to have a department of public health, to look idly on without being considered criminally negligent. We therefore hope that our Boards of Health here will so urge upon both municipalities and governments, that immediate and adequate steps will be taken to protect the people from this serious danger.

VALUE OF THE MURPHY BUTTON.

At the meeting of the Societè de Chirurgie, Paris, on the 14th of November, M. Chaput read a paper with the above title. He compares the sizes of buttons used with the size of the intestine. The circumference of the button is given as 66, 78 and 85 mm. for the three sizes. The circumference of the intestine, based upon the measurement in eight cases, is found to be 33 mm. After dilatation, however, this becomes 80 mm. He admits that the intestine can be readily distended, but that the distension has its limits. In this connection he presented a biliary calculus 70 mm. in circumference removed from the intestine of a patient suffering from obstruction. He had only done one operation on man; the patient died forty-eight hours after operation; at

the autopsy the intestine was found very much thinned, and almost perforated at the rim of the button; a hard faecal mass had occluded the lumen of the button, producing obstruction. He admits that death was not due to any fault of the button in this case. The use of the button is thought to be often impossible in the large intestine, as complete co-aptation can not be obtained. He objects to the sharp edges of the button, and the poor soldering which gives way, when sterilization is performed at high temperatures.

He concludes as follows: "Taking into consideration the advantages and disadvantages of the Murphy button, one arrives at the conclusion that the appliance is very ingenious, and notably shortens the duration of intestinal operations. Unfortunately its employment is not without danger, and requires great precautions and prudence. Finally, it is possible with certain modifications, to make it a satisfactory instrument."

Dr. Chaput seems very much afraid that the button may not be passed per rectum, but although he cites a number of operations both on men and animals, he has not presented any case where this occurred. In regard to his criticism of the button itself, it may be that Dr. Chaput had got hold of a button as faulty in construction as the one Dr. Murphy objected to when last in Toronto.

The period of incubation of syphilis, according to Prof. Horwitz, is from 10 to 98 days, but in most cases the disease makes its appearance in 21 days.

Correspondence.

The Editors are not responsible for any views expressed by correspondents.
Correspondents are requested to be as brief as possible.

EDITOR DOMINION MEDICAL MONTHLY:

SIR,—I don't know whether the plan of your magazine includes the admission of the medical sisterhood to your columns, but, for very many reasons, I know that it *should* do so, and therefore, by way of an "exploratory operation," I venture to ask space for a few comments on the excellent address by Dr. Bayard, of St. John, N.B., which takes the leading place in your issue for October.

The most of that address I have read with pleasure and profit, but his conclusions about the education of girls seems to me to be based on imperfect premises, because he does not (as a physician may well be expected to do) go to the root of things. It is possible that the hypersensitiveness which he seems to think indigenous to the female nervous system, may be, in reality, a consequence of something very different from mental over-exercise, and an instance of mind sacrificed to a false standard for the body, instead of the reverse, which he very laudably deprecates.

Suppose a class of boys encased in tight, or what are called "loose," corsets, and then "stimulated by a system of ranks and rewards" to reach "an arbitrary standard of requirements." Might we not reasonably expect nervous explosions; and, if the thing were continued from one generation to another, a marked lowering of the nervous tone? It seems to me that no more unanswerable proof, that it is absolutely safe to evolve from the female brain by education and use

all that its Maker has involved in it could be given than what has been done by women under their present disadvantages of dress.

Excess in any direction is a bad thing, both for men and women, but the comparative effects of the same amount of study on girls and boys cannot be ascertained, while in one the vital organs are allowed freedom of action and circulation, digestion, assimilation, metabolism, excretion, go on as well as the normal constitution of the individual will allow; and, in the other, a system of compression and restriction of vital functions commences in childhood and is carried on through all the years of life to the very borders of the grave.

Let peripheral messages of unrest and discomfort, of disturbance of function and circulation, be constantly conveyed to the *masculine* nervous centres during the years devoted to study, and note the result. Only then can we draw a just comparison between the effects of study on the two sexes, and if, in the meantime, the false standard which compels the use of the corset with girls were overturned, and the long-suffering female organs given freedom to live, not merely to exist, we should perhaps find some writer rendering a verdict as to the comparative irritability of the male and female nervous systems the exact reverse of that of Dr. Bayard.

Recent experiments with the Wano-meter show the average pressure exerted through the agency of a loose corset to equal thirty-five pounds, and in different wearers, lacing more tightly, this is increased all the way up to eighty and ninety pounds. Displacements of liver, stomach, pancreas, etc., and pelvic organs found in

post-mortem examinations of all corset wearers, as testified to by Gugels, Frerichs, Murchison, Braun and Corbin, reveal the frightful difficulties through which our daughters are endeavouring to keep pace with our sons at school and college. Starved for air, hampered for blood, they yet work well, and that nature rebels as little as apparently she does (but the post-mortem alone discloses the full extent of her rebellion) is the most surprising thing about the whole matter.

Now, why does not a writer like Dr. Bayard take this into account? I think this should be the message to our girls from the physicians of to-day: "Don't be afraid to develop yourselves to the utmost in every direction. This is the obvious purpose of your being. To fear and so shrink from it is to arraign your Creator, from whom you have received your primal endowments, but absolute freedom is the condition required for all normal growth from the cell, through the organs, to the whole body, and also of the intellectual and spiritual being. As long as you wear corsets you are committing slow suicide."

I have been in practice for eleven years, and have paid great attention to this subject, and it is my deliberate conclusion that it is not because a girl is a girl that the strain of study is sometimes hurtful, nor because a boy is a boy that he sometimes bears it better, but it is because the average boy is allowed and encouraged and, indeed, often forced to lead a far more healthful life than is provided or tolerated for the average girl. I have seen exceptional girls who have cast off the corset and other unhygienic adjuncts of feminine dress and

living, who have gloriously justified me in this opinion.

Perhaps, I might give a passing notice to a paragraph which quotes from Herbert Spencer, and seems to assume that after all a woman's highest good is attained just in the measure in which she becomes attractive to men, but unless we suppose all men worth attracting this rule will not hold good. My impression is that men are on the whole improving, and that this improvement is shown in the undoubted fact that more and more they are coming to appreciate the developed woman, more and more do they invite her comradeship and seek her counsel and aid, more and more do they miss in a merely pretty woman the soul and intellect which shines through the features of her more thoughtful sister.

I wish I could have a peep into Dr. Bayard's mind and find out whether the "fairly rounded figure" which he says "draws admiring glances" is corseted. If so, the admiring glances should not come from doctors.

Health is beautiful, but there is no true health without development. We could not admire an undeveloped limb on a woman's body. When the uterus retains its infantile type the physiological function of reproduction is impossible. We would think it a misfortune if the adult stomach (even in a woman) never got past the digestion of milk; why should we grudge full development to the most glorious of all structures—the brain (though of the feminine type). I almost think it would be better that it should learn to express itself in its full power, even if it were quite certain that some time would elapse before the average man could learn to recognize and appreci-

ate its rare attractiveness, and I believe that the secret of health in woman will be found not in putting restrictions on any course of study for her, not in hampering her mind, but in removing utterly all restrictions from her body, compelling athletic exercises, deep breathing of pure air, wholesome diet, and dress contrived on these three principles: (1) Absence of all pressure; (2) all weight on the shoulders; (3) uniform protection and warmth. When these principles are carried out she will not fail to prove herself equal to all educational requirements that may be successfully met by her brothers.

I am, dear sir,

Very truly yours,

AMELIA YEOMANS, M.D.

245 Portage Ave., Winnipeg Man.
Nov. 5th, 1894.

[Our welcome is to Medical Science, be its exponents and practisers men or women.—ED., D. M. M.]

Personal.

Dr. G. Cowan, who for twenty years was in active practice in Harriston, but later resided at Attwood, has bought out Dr. Dobie at 110 McCaul Street.

Dr. Noble has removed to 314 Queen Street East.

Dr. Dobie has left Toronto permanently, and intends practising at New Orleans.

Dr. J. P. Russell has located at 217 Spadina Avenue.

It is with regret that we announce the retirement of Dr. W. H. B. Aikins, the conductor of one of the departments of THE DOMINION MEDICAL MONTHLY. *Canadian Practitioner* and *Ontario Medical Journal*, please copy.