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CANADA
# MEDICAL RECORD

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## Original Communications.

### PROCEDURE IN POST-MORTEM MEDICO-LEGAL EXAMINATIONS.

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In the exercise of his manifold duties every practitioner is liable to be called upon to perform post-mortem operations; either for the elucidation of obscure deaths, or in the furtherance of the investigation of disease or crime. The majority of medical men in their busy life of treating and healing the sick have little time, or maybe inclination, to pursue studies necessary for a proper examination of the dead and present careful and exhaustive reports in such investigation. The following notes of the procedure in making a post-mortem examination, with such illustrative cases as have come under my notice during some years of connection with hospital and civic authorities, I have thought may be of use to the younger practitioners and students of medicine.

#### THE POST MORTEM.

After the official visit to the place *where the body was found*, and an inspection *on the spot* by the Medical Examiner, have been made, and a preliminary investigation, including an interview with the friends, relatives or police as to the probable or

possible cause of death, and such observations from the immediate surroundings have been completed, the post-mortem examination is of paramount importance and interest.

This examination should be as thorough as possible; no pains nor time begrudged. It should be observed that no pathologist ought to consider that one case requires more care or searching observation than another, because one may be requisite for judicial reasons, and another simply performed at the request of relatives or in the furtherance of pathological discovery. All autopsies, whether conducted by the Medical Examiner or Pathologist in a public or private capacity, should be done patiently, carefully, skillfully and completely. Nothing should be omitted which can contribute, however slightly, towards the identification of the person, and the determination of the exact condition of the remains, natural or otherwise, and the cause of death.

Of course it cannot be supposed that all practitioners can have the skill and knowledge which is acquired by the long practice of public officials in making post-mortem sections, but all can be deliberate and painstaking and so submit a report to which no reasonable exception can be made.

When supported by a careful record, and an accurate knowledge of the conditions found at the necropsy, the medical jurist need not fear criticism by his fellows, nor dread facing a judge and jury in testifying in court. "Whatsoever thy hand findeth to do, do it with thy might," is a text which should guide the medico-legal expert as well as every thoughtful professional man.

When the external examination of the corpse has been finished, it is the duty of the Medical Examiner to detail the facts in plain terms, such as will be equally understood by the profession and the laity, and are at the same time consistent with scientific accuracy; but he must not hesitate to use the proper anatomical term if requisite for precision and clearness; as he can readily give a further description if necessary, *e.g.*, epithelium, which has no definite equivalent term in English.

This rule applies both to the written report and to the verbal statement on the witness stand, though in the written report, which is especially for the information of patho-

logists, judges, counsel or other specially educated people there may be more freedom in the use of technical terms.

In giving evidence before an ordinary jury, however, the simplest words and phrases must be employed, so as to appeal to the usual limited and commonplace intelligence and acquirements of such a body of men as is most frequently, gathered together.

The next function of the examiner is to deduce from the appearances he has described the cause of death, and to give as reasonable an opinion as his judgment and knowledge warrant, how the pathological conditions found were produced. Thus it is his office to state whether the cause of death is presumably natural, accidental, suicidal or homicidal. To quote familar instances of sudden death, acute pneumonia may have ended fatally; or appearances may indicate that the fatal issue was caused by a gunshot wound, a knife thrust or any other deadly injury.

The following description of the procedure of an autopsy only applies to bodies examined before decomposition has set in to a marked extent, and does not apply to bodies which have been exhumed or are greatly putrified or consist of mutilated human remains. (These will be referred to later; and also the results of embalming fluids.)

The post-mortem examination is divided into two parts as relating to the external and internal aspects of the body.

First, a general inspection is made, and an outline given of the appearance and condition, such as "The body is that of an elderly man with greyish beard and hair, well nourished, surface pallid, rigor mortis present and there being some post-mortem lividity of the dependent parts," or "the body is that of a girl, apparently about 12 years old, of fair complexion, with brown hair. There is great emaciation of the corpse. The orbits hollow and the temporal fossæ much depressed, rigor mortis has passed off in the head and other extremities, but there is some stiffening of the knee and ankle joints. There is green discolouration of the lower part of the abdomen and considerable post-mortem hypostasis.

Then the height is measured, and that is best taken by marking the table with lines corresponding with the vertex of the head and with the sole of the foot. The reason of this is, that if rigor mortis be present it is difficult to keep the body straight for measurement, and also to allow properly for the curves of the body.

With regard to the weight, it is not always of importance to be extremely exact. It may generally be estimated approximately by sight (as 120 lbs. to 200 lbs.). The proper relation of weight to height may be ascertained from tables based on the average of many observations. When there is an apparent disproportion the weight should be accurately taken, especially in the case of a much emaciated person, whether an adult or a child, and always in the examination of recently born children. Unless the weight is noted before the internal examination is finished, the loss of blood and other fluids may lead to an erroneous result. The loss of flesh and weight may be accounted for by wasting disease, such as phthisis, cancer, etc., but in the absence of such causes the question of starvation, either from criminal interference or destitution would arise, and could only be satisfactorily investigated if the body had been accurately weighed in the first instance.

*Sex.*—As these instructions only have reference to bodies examined soon after death or before decomposition, or at a time when it is but slight, the sex can be at once determined either by the external or internal organs. This point is merely noted as a so-called hermaphrodite might be a subject for inquiry.

*Nationality.*—This can be determined with fair accuracy by simple inspection and judgment, if the subject has the characteristic colour, size, shape of head, etc., of one of the various principal races, under the conditions here treated of; namely, the bodies being seen soon after death or before the marked advance of decay.

When these more general observations have been completed, the specific and individual features must be considered in systematic form, thereby obviating the omission of any important detail.

Rigour mortis or cadaveric rigidity is first to be sought for, and its presence or absence, amount and locality noted with the view of determining approximately the length of time since the death. The onset and disappearance of this sign varies under certain conditions which will be described hereafter; as well as the putrefactive changes which should next be examined into; in this further inquiry similar note should be taken as to its position. The appearance of the fingers and the progress of decomposition in one or another part of the body may help in the ultimate decision.

*Injuries.*—The question as to injuries of all kinds found on the corpse is a most important one, which requires the greatest care and attention. They may be superficial marks of red, yellow, blue, green or black colour varying in size and shape, without destruction of the cuticle. It is the extravasation of blood into the skin and subcutaneous tissues which gives rise to these three appearances, viz., *vibices* or *petechiæ*, or spots resembling those by a flea bite, and the larger kind known as *ecchymosis* or bruise. Valuable information may be gained from these marks; for instance, the bruise caused by the grip of the hand on a limb would give a different impression from that made by a blunt weapon or clenched fist, or the extravasations due to scurvy, the latter hemorrhages being generally in the flexures of the joints or in the post aural region of the neck; and again the *petechiæ* seen in typhus, purpura or rheumatism differ in position, size and appearance from those caused by lice or other parasites.

The distinction between *post-mortem* lividity or hypostasis, and bruising or ecchymosis sometimes must be made, and this can be done by making a simple incision into the mark; the ecchymosis caused by the extravasation into the tissues does not yield fluid blood, for the blood which flowed from the capillaries and smaller vessels of the skin and subcutaneous tissues has coagulated in these tissues, and is seen as a dark purple and black mass or lines; but a hypostasis will yield fluid blood on incision, as the blood comes from the veins still full of black blood.

The colour differs materially, as the hypostastic colour is

more frequently purplish, red or mottled, and the ecchymosis may be of any colour from red to yellow, green and black. A case in point occurred in some Socialistic riot in Trafalgar square, London, England, in which there was crescentic discolouration on the back of the left knee joint. This was said by the surgeon who examined the case to be the result of decomposition, but a second autopsy having been ordered by the coroner, it was found on section that it was a distinct ecchymosis, as shown by the coagulation of the blood in the tissues, and the appearance noticed not being visible on the other side. This comparison of the two sides should always be made, though other data must not be neglected.

The foregoing remarks relate to injuries without destruction of the cuticle and cutis vera.

We may, however, find such swellings as bullor blebs, which are due to the collection of serous fluid beneath the cuticle, which may be the result of disease, or, if caused by injury before death, may be due to extreme heat or irritant applications such as blisters; or may be produced after death by the action of putrefaction. There is generally in such cases some superficial exfoliation over *these blebs*. To discriminate between the two is generally not difficult by the light of other signs found on the corpse, *i. e.*, burns, especially if causing death, would probably produce other characteristic appearances; and irritant applications are generally placed for some definite purpose on the chest, abdomen, legs, etc.

Any hardening or cicatrization or charring of the skin must be observed. It should be remarked that in discussing external marks of violence, in the present article, only such indications are given as may be of use in the description of the autopsy. The actual condition and differentiation of injuries will be discussed later. With reference to wounds which have penetrated or destroyed the skin, careful measurement must be made and a minute description given; if an incised wound, the direction, length, the characters of the edges, whether clean-cut, jagged, ecchymosed, contracted or gaping, etc., should be carefully noted; of a round or triangular wound, such as made by a bullet, the

diameter, the condition of the edges, if darkened or bruised, etc., is to be recorded. Then all dislocations, fractures, deformities, abnormal processes of bone and other conditions of the skeleton which may aid in the research, must be discovered and described, and afterwards compared with the internal appearances.

Scars, tattoo marks, impressions made by rings on fingers, garters on the legs, or by ligatures round any part, as for instance circular or oblique marks around the neck, made apparently by rope, string or other material, or round the limbs or trunk, should be noted. Sometimes it is important to decide whether such a mark has been made post mortem or ante-mortem, as in the case of a murdered person being hung after death, or a cord tied around a body for the purpose of carriage.

In the decision between ecchymosis and hypostasis this point is also of importance: that pressure will cause the removal of blood from a hypostasis and not from an ecchymosis; and the marks made by a ligature applied after death would not present the same appearance either upon the skin or in the deeper structures as if the parts had been involved before death.

Perhaps this can be better explained by an example. If the throat has been compressed and death caused by hanging or strangulation, not only will the mark made by the cord show signs of ecchymosis, but the larynx, vessels and other structures beneath the skin will also be torn or show extravasation of blood; whereas, if the cord is placed after death, though there may be a depressed mark, there would be neither ecchymosis of the skin nor injury to the deeper tissues caused by that pressure alone.

## INTERNAL EXAMINATION OR SECTIO CADAVERIS.

The instruments for use in the autopsy should always be kept scrupulously clean and in good order. The knives, scissors and all the tools should be carefully selected; the knives should be sharp, well balanced and made of the best steel; the scissors should have a strong reliable point, the blades keen and the handle well fitted to the fingers. A saw must be chosen which has a good firm resistance to the back.

It may be remembered that a bad worker always complains of his tools, and that on the other hand a good worker accomplishes good results with a few simple instruments; many a thorough examination has been made by an experienced pathologist with only a scalpel, scissors and butcher's saw, but it is better to avoid the charge of having bad tools, and have all that are usually necessary, and a good reinforcement in case of need. The ordinary case should have the following contents:—

1st. Knives. Three or four section knives, each about 9 inches long, with a well tempered blade, 4 inches long, from 1 to 1 1-2 inches wide, and the back about 1-8 of an inch thick; the handle strong and made of wood 5 inches long. Probe-pointed bistoury.

2nd. Several scalpels of various sizes such as are used in dissecting.

3rd. A long thin knife, 8 to 10 inches on the blade, and 2 inches wide, with a five-inch wooden handle. This is principally for examining the brain, but can also be used in section of the lungs.

4th. Cartilage knife.

5th. Forceps. Dissecting forceps, bone forceps and costatome.

6th. Scissors. Enterotome, blunt pointed scissors, sharp pointed scissors for large arteries, the larynx and bronchi. A small narrow pair, with one blade probe pointed, for cutting ducts, the ureter or small arteries.

7th. Silver probes from 5 to 10 inches in length and in size 1 to 3. French catheter and director. Does this mean by catheter scale or wire gauge?

8th. Wooden mallet.

9th. Steel chisel.

10th. Steel hammer, with the head blunt at one end and wedge-shaped at the other; the handle of steel, with a strong hook for removing the calvaria.

11th. Needles, both straight and curved, with large eyes.

12th. Strong thread or fine string.

13th. A saw with fine teeth and a removable handle and back. The blade about 10 to 12 inches long.

14th. A flat steel, stiff measure, 6 inches long, marked in centimetres on one side and 1-16 inches on the other. A tape measure, preferably of steel, 5 feet long.

Besides the instruments, the examiner should have sponges; tow, oakum or other absorbent material; a mackintosh apron and gloves. The objection to gloves is that they interfere with the touch in the more delicate operations, when it is desirable to have the hands and fingers free and unclothed; besides this, gloves are liable to be easily cut or ruptured, and the hands may be soaking in poisonous fluids unperceived by the operator.

The usual procedure in making an autopsy varies according to circumstances. In a medico-legal examination it is in proper order to open the skull and examine the brain before the other viscera are viewed, for the reason that if the blood is drained from the large veins, the appearance of the brain and its membranes externally, and the aspect shown by incisions of the interior are very materially altered. In many cases it is important to begin with this examination even where there is not much doubt as to the cause of death and the post mortem is made for some pathological reason, but as a rule, in private or hospital practice, the process begins with that part supposed to be affected and afterwards the other regions investigated. As these directions are to apply both to public, official and medico-legal duties, and to such researches as may come in the way of any physician, whether attached to a hospital or in private practice, the different methods of carrying on the autopsy must be described. For instance, in a case of pneumonia the thorax is first explored, and afterwards the other organs may be examined, or, in a case of meningitis, the head and brain first examined and then the body; or, in a case of suspected criminal abortion, the abdomen and pelvis are taken into consideration before the head and thorax; but in any thorough autopsy all organs must be viewed, dissected and described, whatever the course of the examination may be. The procedure in each of these conditions will be fully considered, and illustrated cases related in detail.

It should be stated in this connection that though the

examination of the spinal cord is not always made, it may be desirable, or indeed imperative, when the results otherwise found in the examination have been insufficient to account for the death. It may be taken as a rule that, as in the removal of the brain, the medulla and the upper part of the cervical region are cut out, this is all that is requisite; but in cases of obscure poisoning, where the presence of such drugs as strychnine, aconitine, æserine, atropine and other vegetable extracts, which directly affect that part, is suspected, it is of the highest importance. In any suspected injury to the vertebral column, again, the section of this part is to be performed. Of course in autopsies made in hospital work, and mainly for the furtherance of science, it should always be the duty of the pathologist to examine the cord, both by section at the time, and by microscopical investigation after the proper period needed for hardening has passed.

Arriving at the section of the chest and abdomen, the examiner takes the section knife firmly by the handle to make the initial incision. It is well to be accustomed to use either hand, as occasions will arise where the left hand is more useful than the right. Some experts prefer to place the forefinger on the back of the blade, while others grasp the knife as in the action of carving meat. The incision is to be made in the median line, from the suprasternal notch to the upper border of the pubic crest, either by a single long cut or by several continuous cuts. A skilled pathologist invariably makes the first incision by one cut, but sometimes it is customary to make two or three, the first from the suprasternal notch to the ensiform cartilage or umbilicus, and then a second from that point to the pubes; and in cases of great obesity, two or three cuts are better than one, except in the hands of experienced men. On ordinary occasions more than one preliminary incision should be deprecated. The operator must bear in mind that the object is to open the body speedily and not to gradually dissect the tissues as in the study of anatomy; so that it cannot be too often reiterated that the handling of the larger knives in autopsies and that of the smaller scalpels in anatomical dissection is very different, the former making long sweeping cuts, the latter, which are held

more like a pencil, short delicate incisions. The incision or incisions are first made through the skin and superficial tissues, and then the abdominal cavity is opened just below the xiphoid cartilage.

The fore and middle fingers of the one hand are inserted into the opening, and the knife held in the other hand, with the cutting edge directed upwards, and carried down to the lower limit through the muscles and visceral peritoneum, so as to expose the omentum and intestines. Then the pectoral muscles must be cut from the ribs and sternum to the bone, and the conjoined tendons of the internal oblique and transversalis and the tendons of the recti muscles divided below. This is to be done subcutaneously from within outwards, without injuring the skin. It may here be insisted that throughout all autopsies, whether made for forensic purpose or in hospital and private practice, the utmost care should be taken to avoid any apparent mutilation of the corpse ; and this is, if anything, more to be considered in private work, where the credit of the practitioner may depend on the good will of the friends of the deceased. By the means above described the abdominal cavity will be ready for inspection, and it is better to at first note if the viscera exposed are in a normal position and of a natural appearance.

The thorax is then to be opened by cutting through the cartilages of the ribs at their junction with the bones, from above downwards ; first the knife directed upwards and outwards from the middle line, on account of the oblique direction of the anatomical connection.

The sternum is then to be disarticulated from the clavicles; and by cutting through the attachments of the diaphragm to the inner surface of the costal cartilages and the end of the sternum, and the intercostal muscles between the cartilages, the whole front of the thorax can be removed and the cavity opened. In cases of old age and premature ossification of the cartilages a costotome is needed; or a better plan is to use a saw, thus avoiding the rough edges which may scratch the hands of the examiner.

*(To be continued.)*

# Progress of Medical Science.

## MEDICINE AND NEUROLOGY.

IN CHARGE OF

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### ON FUNCTIONAL NERVOUS AFFECTIONS IN CHILDHOOD.

Saenger (*Munch. med. Wochenschr.; Pediatrics*). These affections were considered by Saenger, in the Aerztl. Verein, at Hamburg (1, 2, '98), and attention was drawn to the fact that hysteria, in the first instance, and more frequently even neurasthenia, was often met with in childhood. Saenger had great facilities for observation in a large private practice besides the opportunities afforded by an enormous clientele visiting the eye clinic of the Alten Allgemeinen Krankenhaus during a period of eight years. It seems remarkable that the greater number of neurasthenic children applied at the Poliklinik on account of visual defects, which were diagnosed as "nervous asthenopia."

Saenger divided his material into four groups: (1) Neurasthenia. (2) Hysteria. (3) Neuro-hysteria. (4) Hereditary neuropathy psychopathic (nimderwerthigkeit). The symptoms met with in these groups are the following:

1. Anemia was present, as a rule, instability of the psychical equilibrium, anxiety, rapid fatigue, complaints of cardiac palpitation, vertigo, precordial distress, increased vaso motor irritability, a feeling of dissatisfaction, constipation, insomnia (a difficulty in getting to sleep, pavor nocturnus), frequently also a tremor of the eyelids when the eyes were lightly closed; occasionally true phobias.

2. Greater intelligence than is usually found in neurasthenics, a lurking, watchful, sly facial expression, stigmata as in the hysteria of the adult, monosymtomatic phenomena; aphonia, contractures, paralysis of the extremities, cough, tremor, anomalies of carriage (hysterical scoliosis, torticollis), blepharo-spasm, ptosis, hemichorea; in rare cases amaurosis.

3. This is the form most frequently met with in children, presenting manifold phenomena and variously combined interesting symptoms. There is only slight intelligence, indifference; pains are complained of in the head and eyes,

nervous asthenopia is present, also photophobia, contraction of the field of vision, absence of the conjunctival reflex, absence of the pharyngeal reflex, enuresis, somnambulism, hallucinations.

4. Hereditary taint, frequent convulsive seizures during the first years of life, later conditions resembling tic in the form of grimmacing and choreic movements; great peevishness and sensitiveness, stubbornness, violent temper, afraid of being alone; involuntary naughtiness, viciousness, strong egotistic qualities, with a tendency to torture man and beast. These mental defects, frequently accompanied by retarded bodily development, and also by imperfectly balanced brain power.

Between these groups all transitional forms may be found. Boys and girls are attacked in about equal proportions. The age at which they are most usually affected is between ten and fourteen years, testifying to the unfavorable influence of our present methods of teaching and schooling.

Prognosis is favorable in the first three groups, unfavorable in the fourth.

Theoretically considered, there is no sharp dividing line between hysteria and neurasthenia. Moebin's old definition, according to which all those morbid changes of the body are hysterical which are caused by imagination, is not at present accepted, as stigmata, anomalies of the reflexes, contraction of the visual field, are frequently not even known to the hysterical individual, and for this reason cannot be referred to the imagination. Of what, however, the abnormal functional changes in the nervous system consist, we have not as yet been able to say. Saenger views hysteria as a neuropyschosis, while he attributes neurasthenia to some process of exhaustion. The faculties of the neurasthenic patient do not possess the power to recuperate as rapidly as those of the healthy individual; they are therefore exhausted very early, and react. The individual organs are less enduring, weaker, unable to carry out the demands made on them. The cause of this morbid condition may be found in defective environment, in early mental maturity—which is frequently forced, in childish ambition, over pressure of modern education, and in the early necessity of earning a living—depriving the patient of sufficient sleep and relaxation. The medical supervision of schools by physicians appointed for that purpose, who are sufficiently versed in the bodily and mental organization of the child, would be of extraordinary benefit in this direction.

In the treatment itself we must advocate taking these children from school, giving them the opportunity for recu-

perating, improvement in diet, and by ordering general neuro toxic measures, douches, cold rubbings, baths, electricity, energetic suggestions as to the psychical development, but never by hypnosis.

## OXYGENATED WATER IN VOMITING OF PREGNANCY AND IN TUBERCULOSIS.

Paul Gallois and Bonnel (*Bull. Gen. d. Ther.; Amer. Med. Surg. Bull.; Medical Review*), to the Paris Therapeutical Society on this subject, cite Hayem and Pinard as authority for inhalation of oxygen in vomiting of pregnancy, but object that its use is limited to the rich or to the hospital cases. The preparation used is the ten-volume solution of peroxide of hydrogen which contains a little hydrochloric acid from the manufacture. A tablespoonful of this added to a quart of water and taken as a drink alone or with wine during meals. Teaspoonful doses are inefficient; but it hardly ever fails, in the above method of administration, at the end of two or three days after commencing its use, to control the vomiting. When it apparently failed, it was found the patient was either taking too small a quantity or taking an unsuitable preparation. On stopping its use the vomiting returned, and it was immediately checked again on resuming the preparation. It is useless in troubles of gastric origin, and served to differentiate these from the vomiting of pregnancy. But, tuberculous subjects who vomited while coughing, were relieved as effectually. "The tuberculous subject coughs because he eats and he vomits because he coughs." In these cases appetite seems also to be improved. Seven cases of tubercular character with this troublesome kind of vomiting are cited as having responded at once or within three days to this oxygenated water, so that the distressing vomiting was checked and appetite and well-being improved.

How does this preparation accomplish its end in these cases? *A priori* we are tempted to explain it on the principle of Rivière's potion, viz., the liberation of gas in the stomach, which phenomenon we know goes on in this case. But, it is not likely the benefit is due to the mechanical separation of gases, as in the above case, or to the taking of Selters' water, for the beneficial effects are felt immediately in those cases and in the taking of champagne. Whereas, in this treatment, benefit is usually perceived only after the lapse of twenty-four or forty-eight hours. Or, is the benefit due to the presence of the small percentage of hydrochloric acid contained? That would not explain the parallel benefit

from inhalatians of oxygen gas in vomiting of pregnancy where the action seems to be on the general nutrition. It may be a neutralization of the toxic properties of some ptomaine. We know that choline changed to oxycholine is rendered innocuous.

## THE USE OF THE THYREOID.

Dr. W. E. Moseley (*Med. News; N. Y. Med. Jour.*) records five cases of bleeding fibroid of the uterus treated by thyreoid extract. From these cases he draws the following conclusions:

1. That, whereas some patients can take comparatively large doses of thyreoid with impunity, others are injuriously affected by small amounts, and that, in using it, one should begin with a minimum dose, say three grains daily, increasing the amount very slowly and watching its effect upon the heart and kidneys carefully.

2. That, in cases of bleeding fibroids, thyreoid has a very marked influence in checking the excessive loss of blood, and that in certain cases at least its use is followed by a diminution in the size of the growth.

3. That its use, in doses appropriate to the individual, is followed by improvement in the general health, this being probably due to the cessation of excessive loss of blood.

As regards the effects of thyreoid upon metabolism, Dr. Moseley says that all the cases which he has studied during the past two years, some superficially, others carefully, show a considerable decrease in the amount of nitrogen and salts eliminated in the urine. This fact, taken in connection with the undoubted decrease in weight in persons suffering from obesity, renders it positive that the decrease in weight must be due to the increase in the metabolism of fats in the body. Carbohydrates are stored up in the body in only moderate amounts at any time, the increase in weight being due to an increase in the amount of fats (hydrocarbons) in the body. This narrows the increase in metabolism to an increase in the metabolism of fats. Now, by oxidation of fats, the products formed are $CO_2$ and $H_2O$, both of them eliminated principally by the lungs, and both difficult to estimate except by very elaborate apparatus. Whatever histologic connection there may be between myofibromata of the uterus and connective tissue cells of areolar and adipos tissue he must leave to the histologist and gynecologist to discover. He thinks the relation must be nearer than is commonly supposed.

Dr. Moseley further quotes as follows from a com-

munication of Dr. Whitney, who writes from Berlin, where he is working with Professor Thierfelder:

"In accordance with my promise, I have been trying to look up the thyreoid treatment and its effects more thoroughly, but so far have been unable to find any satisfactory report of its results. The effects upon metabolism may be briefly stated as follows: (1) Upon the nitrogenous metabolism and elimination, its influence is stated by some to remain normal; by others, including Chittenden, the elimination is stated to be slightly but uniformly increased, the diet remaining the same. Those observers who have found the daily elimination of nitrogen the same or decreased have possibly failed to take into account the injurious effects of large doses of thyreoid upon the appetite and digestion, with consequent decrease in the amount of food (and nitrogen) ingested. The increase in the amount of nitrogen eliminated remains, however, always slight. (2) The effect upon general metabolism is shown by the decrease in weight which follows the prolonged administration of thyreoid, especially if in excessive doses. As there is not a corresponding increase in the amount of nitrogen eliminated, this loss must come chiefly from the non-nitrogenous elements of the body—that is, fats or the carbohydrates. This is apparently proved in the following ways: (*a*) There is a marked increase in the amount of $CO_2$ eliminated by the body, showing increased oxidation of the carbonaceous materials of the body; (*b*) the loss of weight is most pronounced in those suffering from obesity, leading to its use as an 'anti-fat' remedy; (*c*) in mild cases of diabetes mellitus the sugar may be made to diminish or disappear entirely under the use of thyreoid. These effects may be explained by one or both of the following hypotheses: 1. It may exert a specific stimulating effect upon the areolar tissues of which adipose tissue forms only a modification, due to the deposition of fats. 2. It may increase oxidation by increasing the oxidizing power of the blood. Its demonstrable effects upon the blood are limited, usually showing a slight increase in the number of mononuclear leucocytes, other changes in the blood, found at times, being explicable by changes in the organism, the alteration in blood constitution being secondary, as, for example, the increase in hemoglobin and red corpuscles after administration of thyreoid in bleeding fibroids.

"The explanation of its actions upon fibroids must be hypothetical only. Analyses of dry fibroids show them to contain about fifteen per cent. of nitrogen (average) and only 1.5 per cent. of fats (matter soluble in boiling ether). Its action may be that stated above—that is, stimulation of the

tissue composing the fibroid with resultant absorption, or by an increase in the oxidizing power of the blood, with absorption of the fibroid as a secondary effect."—*Medical Review.*

## PRIMARY MALIGNANT DISEASE OF THE SUPRARENAL BODIES.

Rolleston (H. D.) and Marks (H. W. J.)—*The American Journal of Medical Science*, October, 1898; *Medical Chronicle.*

The authors describe in detail a case of primary malignant adrenal growth occurring in a man aged 50. The signs and symptoms pointed to a diffuse aneurism in connection with the commencement of the abdominal aorta. Hæmatemesis and melæna suggested the view that the aneurism had burst into the alimentary canal. The hæmorrhage was, however, occasioned by the growth having extended into the stomach. There was no resemblance to Addison's disease. Histologically, the tumour was considered to be a carcinoma.

The subject of primary malignant growth of the adrenals is discussed in detail. Tables are given briefly summarising six cases met with at St. George's Hospital and twenty other cases, fourteen of which are collected from literature. Only those cases have been selected which appeared to be certainly primary, and in which the malignant character was shown either by secondary growths or the invasion of adjacent parts.

As regards *frequency*, primary malignant disease of the adrenals is distinctly rare. The authors have only been able to collect 26 cases in all from literature, from the London hospitals and museums, and from various private sources. Beadles states that amongst 4,800 autopsies at Colney Hatch no case has been met with. *Sex* is a factor of no importance. Of the 26 cases, 13 were males and 13 females. The average *age* was 37½ years; the extremes being 9 months and 73 years, both in females. The average age of the 9 cases of carcinoma was 44⅙ years; that of the 18 cases of sarcoma was 32⅓ years. Thus sarcoma, as is generally the rule, occurs at an earlier age than carcinoma, and the female sex is attacked earlier than the male.

As regards *morbid anatomy*, the growth is usually vascular, soft, rapidly growing, and having a marked tendency to undergo fatty degeneration, necrosis and softening in the interior, with formation of a central cavity, which contains a mass of blood-stained and degenerated growth. It must, however, be remembered that a similar softening may occur in undoubted adenomata.

With respect to *method and direction of growth*, the tumour usually spreads forwards, but from its pseudo-cystic character is less readily detected than a solid renal growth. Possibly some retro-peritoneal sarcomata may really arise from adrenal tissue. On the right side an adrenal growth may extend to the right lobe of the liver. The spleen is not often affected, but the pancreas and stomach may be invaded. If it infiltrates the kidney it may spread into the renal vein, and even project into the inferior vena cava. Secondary growths are most frequently met with in the liver. This was so in 14 out of 26 cases, and in addition it was invaded by continuity in 3. The lungs were affected in 6; the pleura in 3; the kidney 3, but in addition was invaded by continuity in 4 other cases; aortic lymphatic glands in 6; and peritoneum in 3. The heart was affected in one case, as also were the cerebrum, cerebellum, bones and skin. The other adrenal was infiltrated with secondary growth in 2 cases.

Adrenal growths have been observed in association with disease or malformation of the corresponding kidney.

The *histological characters* are often difficult of interpretation. Of the 26 collected cases the nature was definitely described in 24; 9 were carcinoma and 15 sarcoma. The sarcomata were as follows:—

| | |
|---|---|
| Mixed or irregular celled | 3 |
| Round | 2 |
| Small round | 2 |
| Large " | 1 |
| Spindle | 1 |
| Small spindle | 1 |
| Myo-sarcoma | 1 |
| Sarcoma (no further description) | 4 |

The authors consider that malignant adrenal growths "are peculiar, and form a special class; they may approach, structurally, either the carcinomata or the sarcomata, and sometimes one and the same tumour may, in different parts, resemble both."

The *clinical features* of these cases present exceptional difficulties. "It does not appear that the complete picture of Addison's disease has been presented by any one case of primary malignant disease of the suprarenal bodies, even when both the organs have been invaded; but some of the symptoms of Addison's disease may occur in primary adrenal new growths." Pigmentation may occur. Vomiting, asthenia, pain in the back may all be present.

In *diagnosis* adrenal growths have to be differentiated

from renal growths, tumours or hydatid cysts of the liver, enlarged gall-bladder, retro-peritoneal growths, pancreatic cysts, and hæmorrhagic abdominal cysts.

*Prognosis* is hopeless unless the growth be removed early.

Finally, the authors summarise their researches in the following *conclusions* :—

(1) Primary malignant growths of the supra-renal bodies are rare, but their anatomical characters are fairly constant—hæmorrhagic, with a tendency to break down in the centre and form a pseudo-cyst. There is no marked difference in the incidence of the disease on the two sides of the body.

(2) Sarcoma is the more frequent form, occurring in fifteen out of 24 cases; carcinoma also occurs, being met with in 9 cases. There is considerable variation in the structure and nature both of the sarcomata and of the carcinomata met with.

(3) The sexes are affected equally, but the average age of female cases ($31\frac{1}{2}$ years) is much lower than that of males ($43\frac{5}{10}$ years).

(4) The average age is $37\frac{5}{10}$ years, and is lower in cases of sarcoma than in carcinoma.

(5) There is no special tendency to the incidence of these tumours in early life. The four cases which occurred under four years of age were all female.

(6) Secondary growths occur most frequently in the liver.

(7) The typical clinical picture of Addison's disease is not presented, but in some rare instances it is partially, though imperfectly, suggested.

(8) There is a great variety in the clinical aspect of the case, but the condition which it most often resembles is that of renal tumour. There is no certain way of correctly distinguishing suprarenal from renal tumours, though there are several points which may help in the differential diagnosis.

## THE PITUITARY BODY AND DIABETES MELLITUS.

Loeb (M.)—*Centralblatt f. innere Med.*, September 3, 1898; *Medical Chronicle.*

The author has previously (in 1884) drawn attention to the association of glycosuria with tumours of the pituitary body. He pointed out that tumours of the pituitary body

by pressure on the adjacent parts, may cause increase of temperature, in other cases diminution of temperature, and in many cases of glycosuria also. The connection had also been pointed out many years previously. The association has been regarded as the result of implication of the diabetic centre in the medulla; but lesions of the fourth ventricle are not often associated with diabetes. Verron found three cases only out of 15 tumours, and in 21 cases of tumour of the medulla, collected by Bernhardt, only one presented symptoms of diabetes mellitus.

Tumours of the pituitary body are very rare, but the reported cases have been more numerous since the writings of P. Marie have drawn attention to acromegaly and its association with growths of the region mentioned. According to Sternberg, in this disease the anterior part of the pituitary body is chiefly affected; whilst Buda and Jausco state that cases of acromegaly are met with in which no changes are found in the pituitary body. But, certainly, in all the recorded cases of acromegaly associated with diabetes, a tumour of the pituitary body has been found *post-mortem*.

Hansemann found on an analysis of 97 cases of acromegaly recorded in medical literature, that in 12 diabetes was present.

In acromegaly *post-mortem* examination almost always reveals a tumour of the pituitary body, but on the other hand a patient may die from tumour of the pituitary body without the occurrence of any symptoms of acromegaly.

Muller found, on an analysis of 28 cases of tumour of the pituitary body, that symptoms of acromegaly were present in 10 cases only.

The occurrence of diabetes mellitus in acromegaly is so frequent that the association cannot be accidental. As to the cause of this association, it is interesting to note that in a few cases pancreatic changes were found, and these have been regarded as the cause of the glycosuria; but in other cases the pancreas has been normal. Most authors believe that the glycosuria in acromegaly is caused by the tumour of the pituitary body, and in favour of this view is the fact that tumours of the pituitary body alone can produce glycosuria in cases in which there are no symptoms of acromegaly. That the explanation is not to be found in *alteration* of the function of the pituitary body is shown by the fact that in most cases the lesion has been one destroying the gland tissue (sarcoma, carcinoma, gumma). Neither is it probable that the explanation of the glycosuria is to be found in loss of the function of a gland which is so very small; also it is interesting to note that in animals the pituitary body has

been removed, and yet glycosuria has not followed, though the animals have often lived one year after the operation.

There only remains, therefore, the view that diabetes, in cases of tumour of the pituitary body, is due to pressure of the growth on the brain. That the growth in the pituitary body can exert pressure is shown by the compression and flattening of the optic nerves. If the view be correct, that the pressure of the tumour of the pituitary body is the cause of the diabetes, then it is to be expected that if this pressure was diminished, by a diminution of the size of the tumour, the diabetes would disappear. A case of importance bearing on this point has been recorded by Finzi. The case was one of acromegaly complicated by diabetes; at the end of nine years the diabetes gradually disappeared. Many years afterwards death occurred. At the autopsy the pituitary body was found to be totally absent. In the remarkably deep excavation of the sella turcica only a slight white mass of detritus was found. In this case the disappearance of the diabetes may be explained by the diminution of the tumour and of the pressure on the adjacent parts of the brain. More difficult of explanation are the cases of acromegaly in which the diabetes disappears and then returns again. A case recorded by Strumpell is quoted. Loeb thinks that in this case there were variations in the size of t e pituitary body. The autopsy showed that the tumour was an angio-sarcoma.

A few cases have been recorded in which tumour of the pituitary body has been associated with diabetes insipidus.

The author has endeavoured to show, by the collection of the facts above mentioned, that tumours of the pituitary body are able to produce glycosuria or diabetes by pressure on the neighbouring parts of the brain without the association of symptoms of acromegaly. The exact part of the brain which must be implicated remains to be decided. But lesions of other parts besides the fourth ventricle have been followed by diabetes.

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# SURGERY.

IN CHARGE OF

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## SURGERY OF THE LUNG.

Dr. John R. Murphy, of Chicago, delivered an address on "The Surgery of the Lung," at the Denver m[illegible]ting of the American Medical Association. Dangers of pneumotomy are hemorrhage from chest openings; pneu[illegible]othorax

from bronchial openings; pleuritis of both sides; traumatic pneumonia and sepsis, dyspnœa and shock. Pathological conditions requiring excision are hernia, infected injuries, abscesses, bronchiectasis, gangrene, tuberculous cavities, foreign bodies, hydatids and actinomycosis. In neoplasms of the chest wall involving the lungs excision is desirable. Lungs may be defunctionalised and quiescence maintained by pleural injections, rib resections and thoracotomy with separation of pleural adhesions.

Adhesions and consolidations are technical difficulties of intra-pleural injection. The dangers are given as air embolism, subpleural emphysema, pulmonary emphysema, dyspnœa and sepsis. Shock, hemorrhage, sepsis and pneumothorax are the dangers of operations on the chest wall.

The dyspnœa of pneumothorax, Dr. Murphy holds, is caused by the vibration of the mediastinal septum nullifying the piston action of the diaphragm. Immobilisation of the septum lessens the danger. Pulmonary tuberculosis was cured by surrounding the focus of infection by connective tissues; this tissue growth is favored by immobilisation.

For compressing the lung Dr. Murphy has injected nitrogen gas, which is least active and slowly absorbed. He injected 140 cubic inches in one case, with marked relief to the patient.

There is no danger of dyspnœa so long as the chest is not opened and the vibration of the diaphragm is prevented. There is, however, possibility of air embolism by reason of injury to a vein by the trochar. This treatment is of benefit in early tuberculosis where there is a small superficial cavity in the apex.—*Progress in Medical Science*, Aug., '98.

## TWO CASES OF ROUND WORMS IN THE BILIARY PASSAGES.

Mertens reports a case in which there was icterus accompanied by fever and by attacks of severe colic. The patient gave a history of previous attacks of biliary colic, but the diagnosis was somewhat doubtful, as she developed later, in addition, marked enlargement of the liver, ascites and edma of the lower extremities—symptoms that rendered the diagnosis of tumor in or behind the liver somewhat probable. After two round worms were passed in the stools, there was a continuous decrease in all the symptoms, the patient recovering entirely. One of the worms showed a constriction at about its middle, and Mertens believes this was undoubtedly due to the pressure of the papilla of Vater. This is the only case he has been able to find recorded in which recovery ensued, ex-

cepting one in which an operation was performed for a liver-abscess. He reports also a case with all the symptoms of carcinoma of the stomach and secondary involvment of the liver, in which, after death, in addition to the carcinoma, a round warm was found in the common bile-duct.—*The Philadelphia Medical Journal*, Aug. 13, 1898; *Deutsche Medicinische Wochenschrift*, June 9, 1898 (24 Jahrg., No. 23).

## THE DIAGNOSIS OF ESOPHAGO-TRACHEAL FISTULA.

Kohlenberger reports a case in which there had been pain upon swallowing, frequent severe attacks of cough, especially after swallowing liquids, and the patient had at times coughed up wine and other colored liquids that had been previously swallowed. Nothing definite could be determined by physical examination, so that an attempt was made to determine the existence of a fistula between the trachea and the esophagus by introducing a stomach-tube into the esophagus, having the upper lateral opening directed forward, and at the same time holding a lighted candle before the external end of the tube, the patient meanwhile breathing deeply. During the passage of the tube, the candle-flame was drawn inward during inspiration and blown outward during expiration. Suddenly, however, when the point of the tube was 31 cm. from the upper incisor teeth, the light was quickly extinguished. The same thing occurred after repetition of the experiment, thus making the diagnosis of fistula practically certain. The patient subsequently died of pneumonia, and at the level of the bifurcation of the trachea, there was found a carcinomatous ulceration in the esophagus with a perforation into the trachea.—*The Philadelphia Medical Journal*, Aug. 13, 1898; *Deutsche Medicinische Wochenschrift*, June 9, 1898 (24 Jahrg., No. 23).

## TRENDELENBURG'S OPERATION FOR VARICOSE VEINS.

Cumston (*Annals of Surgery*, May, 1898) regards Trendelenburg's operation as the ideal method of treating varicose veins of the lower extremity associated with extensive ulceration. Trendelenburg found by experiments that the veins of the leg, after they had been temporarily emptied by elevation of the limb and compression of the trunk of the saphenous vein, are refilled slowly by the return blood coming from the arteries, and instantly by a blood wave coming from above downwards. The conclusion that the veins in the legs are distended by great central pressure led this surgeon to advise

ligature of the saphenous vein at two points and excision of the vessel between the ligatures. An incision about 4 inches in length is made over the saphenous trunk, beginning just above the union of the lower with the middle third of the thigh. The vein having been exposed is carefully freed with a blunt dissector, and all branches going off from the vessel are ligatured. A ligature is then placed on the venous trunk at the upper and another at the lower angle of the skin incision, and the portion of vein between these two ligatures is cut away with scissors. Cumston's experience has led him to the conclusion that Trendelenburg's operation is certainly the greatest advance that has ever been made in the treatment of ectasis of the saphenous vein, and although every case submitted to this treatment has not resulted in a complete cure, it is almost always followed by marked improvement with rapid cicatrization of the ulcers.—*Gaillard's Medical Journal*, Aug., '98.

## THE THERAPY OF CARCINOMA OF THE RECTUM.

Dr. Hochenegg has operated in 129 cases of rectal carcinoma since 1890; of these 34 were colostomies, 89 sacral extirpations, and 6 perineal amputations (*Wiener klinische Wochenschrift*, 1897, No. 32). Of the 89 sacrally operated cases, 8 were fatal, though 3 of the deaths had no connection with the operation. This is certainly a magnificent record. The writer refuses operation in cases of marked general debility and when there are symptoms of internal metastases; in cases in which the tumor is immovably fixed in the pelvis; and when the grandular infection cannot be limited by the examining finger. Adhesions to the prostrate, bladder, vagina or uterus form no indications to a radical operation, since these organs can if necessary be extirpated. In doubtful cases a colostomy is at first performed; two weeks later, when the tumor becomes less fixed, the extirpation is done. Symptoms of acute intestinal obstruction also form a contra-indication to radical operation. Radical extirpation may be performed by either of two methods, different in principle: perineal and sacral. Hochenegg applies the perineal method in those cases also in which the carcinoma has not involved the anal portion very high up and in which the rectal mucous membrane is soft and easily movable over the tumor. In all other cases he prefers the sacral operations. His procedure in the sacral operation is as follows: With the patient on the left side, a convex incision is made—with the convexity toward the right—from the left sacro-iliac synchon-

drosis to the right lateral border of the coccyx. After the skin has been raised, the coccyx is extirpated and the left wing of the sacrum is chiselled off; in extensive carcinomatous disease the sacrum is severed transversely. Further procedure depends upon the location and extent of the tumor. If the anal portion be also involved, an incision must be made around this portion; the rectum is then isolated and amputated to a point above the site of the neoplasm; the lumen of the remaining rectum is drawn down and sewed in the place of the removed anus, or is brought under the skin at the site of the removed sacrum (anus præternaturalis sacralis); the writer prefers the latter method. If the anal portion be not diseased and the sphincter intact, the severed rectum and the healthy anus are sewed together; this is the "ideal" operation. To prevent separation of the line of suture, because of the insufficiency of the circular stitch, Hochenegg proceeds as followed: The tumor is isolated and cut off above, and is then isolated below, but not yet amputated. The healthy rectum above is then isolated and the amount of its mobility is tested. If this portion of the rectum can be easily brought to the anal opening, the tumor is cut off transversely at a point one centimetre above the sphincter, the anal portion everted and freed of its mucous membrane with forceps and scissors; through the tubular wound surface thus produced the healthy rectum above is drawn and is sutured *in situ*. There are two rows of sutures; one, introduced from the outside, in front of the anus; the other, introduced through the sacral wound. Finally, the ring of the sphincter is connected with the rectum by several buried sutures. If the healthy rectum above is not sufficiently movable to be brought so far down, less of the anal portion must be sacrificed. If the rectum cannot even for a short time be brought through the anal opening, nothing is left but to introduce the sutures, through the sacral wound. After the introduction of the sutures, the writer leaves enough of the wound open to secure drainage. The bowels are moved after the fifth day of operation. At the slightest sign of phlegmonous inflammation, the whole wound is immediately reopened and drained.—*Med. Record*, Aug. 13, '98.

# OBSTETRICS.

IN CHARGE OF

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## DANGER OF THE TRENDELENBURG POSTURE

The tendency of the day is to adopt the Trendelenburg posture in all operations upon the pelvis and abdomen. But the surgeon should not do this unless there is urgent need for the position. First, because it greatly increases the danger from the anesthetic, and prevents one of the principal methods of resuscitation from deep chloroform narcosis, viz.: lowering the head. Second, because there is considerable danger of secondary hæmorrhage. The elevation of the hips forces the blood from the pelvis, and oozing from torn vessels does not occur until after the patient is in the horizontal posture—perhaps after closure of the incision. A number of such accidents have lately been reported.

## TREATMENT OF HÆMORRHAGE FROM CEREBRAL LACERATIONS.

J. L. Audebert reports a case of deep tear of the posterior lip of the cervix in a case of normal labour. The cause of the laceration was not evident, and may have been possibly an unsuspected alteration, œdematous or otherwise, in the structure of the parts. The hæmorrhage was very persistent, but was finally controlled by sutures. The author refers to the various methods of treatment, such as ergotine, vaginal injections, pressure by long catch forceps or dilating bags, vaginal and utero-vaginal plugging, and pressure of the cervix against the symphysis pubis, along with sharp anteflexion of the uterus as practiced by Breisky. He regards them all as ineffectual compared to direct suturing of the torn surfaces. This he believes really will occupy less time in its performance than a thorough vaginal plugging, and requires only the most elementary surgical knowledge. It may also prevent later pathological developments.

## FACE PRESENTATION.

Gessner admits that in individual cases no satisfactory explanation of face presentation can be found. Obstetricians

should report every case where fair evidence exists that some condition favours this presentation. In one of his own the patient was in her eleventh labour. He detected a spastic stricture in the lower uterine segment, which projected into the uterine cavity so as to hold back the fœtal occiput. This spasm was suppressed by narcotics and warm applications, and the presentation was sponstaneously converted into the first vertex position, and delivery followed. This case suggested, in Gessner's opinion, Freund's theory that rheumatism of the uterus is a cause of face presentation. In a second case there was nothing remarkable at the labour; the child was born asphyxiated, and died on the next day. The cranium was markedly dolichocephalic, and the posterior arm of the head lever was nearly a centimetre longer than the anterior. As the deformity was one of the scaphocephalic variety, it must have originated in the course of development in the uterus, and not during the process of labour. The case supports Hecker's theory. In the discussion on Gessner's paper Mullerheim supported Freund's theory. He had seen many cases like Gessner's first at Strassburg, where Freund had detected a relation between rheumatism and abnormal presentations, so much influenced by climate. Nagel and others supported Hecker's theory, having detected deformities of the occiput in face presentation.

## CÆSAREAN SECTION BY TRANSVERSE INCISION OF FUNDUS.

Braun has had experience of Fritsch's Cæsarean section, the operation being the second of its kind ever recorded. Fritsch bases his practice on the course of the secondary branches of the uterine arteries which run horizontally, so that a longitudinal incision down the front of the gravid uterus cannot fail to cause free hæmorrhage. He is accustomed to extirpate diseased Fallopian tubes completely, snipping a wedge-shaped piece out of the uterine cornu. Bleeding is always free, but the tying of a suture passed antero-posteriorly under the bleeding vessel stops it at once. The ligature lies at right angles to the vessel, the most favourable position. Hence Fritsch conceived the idea of making an incision straight along the fundus from cornu to cornu, in order to extract the fœtus in a Cæsarean section. Braun publishes full notes of his own case. The patient was a rachitic primipara with a universally and irregularly contracted pelvis. The conjugata vera was 2¾ inches. Labour pains had set in. Care was taken to antevert the gravid

uterus sufficiently, the upper part of the wound being held together with forceps during delivery of the child. Then the transverse incision was made. Braun found that it bled as much as the longitudinal incision in Cæsarean sections where he had operated during labour at term or in relatively early pregnancy. The placental site did not lie near the fundus. The delivery of the fœtus, which was living and weighed 6 lbs., was neither harder nor easier than through a vertical incision. The wound in the fundus was under 4 inches long after the fœtus had been extracted. The sutures had to be placed close together, 15 deep and 8 superficial being applied. Ergot was given after the abdominal wound was closed, as there was hæmorrhage. The patient made a good recovery.

## LACTATION AND ATROPHY OF UTERUS.

Vineberg after careful examination of the uterus in women during lactation, finds that a true process of atrophy goes on quite independently of even relative debility or anæmia. Indeed, in women who remain feeble after labour or become weak from any cause, external or internal, and in patients anæmic before pregnancy, the uterus tends to remain large. Sub-involution in fact is, as has long been recognized, a morbid condition ; but Vineberg finds that when involution goes on to its full completion, the uterus is reduced to a size smaller than that of the non-parous organ. The author's tables are valuable. This condition—post-puerperal super-involution—is principally seen in nursing women, and from this circumstance has been termed "lactation atrophy." It is normal and desirable, and is temporary, becoming permanent under rare and unfavourable circumstances. When the lying-in woman cannot suckle, the medical attendant should try to bring about super-involution. This course, Vineberg believes, will save her from the development of a host of maladies due to sub-involution.

## PICRIC ACID DRESSING OF THE UMBILICAL CORD.

Rochon points out that three kinds of dressing are applied to the umbilical cord, the oily, the moist and the dry. To the first he objects that it is imperfectly antiseptic, and is opposed to the keratogenic transformation of the young epidermic elements; the second (moist) method is sufficiently antiseptic, but it delays the fall of the cord, and often leaves an imperfect cicatrix ; while the third (dry), by

the rapid desiccation of the cord which it causes, produces the danger of premature separation and hæmorrhage. To meet these objections Rochon proposes the use of picric acid in solution. The cord is surrounded by a piece of absorbent cotton soaked in a 1 to 200 solution of picric acid. Thus the decomposition of the cord is prevented and cicatrisation of the umbilicus is aided. A single dressing may suffice, but it is best to repeat it on the second or third day.

## ARTIFICIAL DILATATION OF THE OS DURING LABOR.

Demelin gives the following indications for dilatation of the os during labor: (1) Faulty insertion of the placenta. He reports eleven cases without a death. (2) Eclampsia and uremia. If the cervix is partially dilated the opening may be enlarged by Bonnaire's method, and the uterns emptied. If the eclampsia occurs prior to the onset of labor, the usual methods should be tried first, such as venesection, purgation, chloral hydrate and chloroform. Labor may begin or the condition ameliorate under such a course of treatment, when bimanual dilatation may be accomplished. If, however, after ten to twelve hours of treatment there be no improvement, the labor should be induced by dilating the os. (3) Apoplectic coma and asphyxia from cardiac disease. This method in these cases may be successful in securing living children from dying mothers, and Cesarean section therey be avoided. (4) Fetal complications. When fetal life is jeopardized Bonnaire's method will give increased chances of life to the, infant. (5) Amniotic infection, a very decided indication for rapid dilatation and delivery. (6) Faulty and dangerous presentations; for instance, shoulder and brow. The method may likewise be employed to dilate the cervix after symphyseotomy. (7) Excessive prolongation of labor in the first stage, as from primary and secondary rigidity of the cervix, protracted simple inertia, and uterine inertia in prematurely induced labor. Bonnaire's method consists in introducing the index-finger of the right hand within the internal os, and gently pressing down by a sort of eccentric massage. The index-finger of the left hand is then introduced, and the two together work slowly and gently, causing the cervical sphincter to yield from fatigue rather than as the result of violence. Gradually the middle finger of the right hand and that of the left are introduced, and then the fourth finger of each hand Dilatation may then be readily accomplished. In forty-nine cases so treated by Demelin there were two

deaths, one from eclampsia and one from apoplexy. The method is most successful after labor has begun, but it may succeed during pregnancy, though the process will be of longer duration and require greater care. The internal os is the one to be acted upon, and it is very resistant, except in the case of dying patients or in abnormal implantation of the placenta. Other methods which he has tried have not given satisfaction. By this method there is no danger to the welfare of the mother, and lacerations of the cervix that result are trifling. The child should never be extracted before thorough dilatation of the cervix.

## GAUZE TAMPONADE OF CERVIX FOR HYPEREMESIS GRAVIDARUM.

F. A. Kehrer reports a case of hyperemesis gravidarum, for which he tried successively bromide of soda, tincture of nux vomica, cocain solution, and painting the cervix with nitrate of silver—all without success. Regulation of the diet, of the bowels, rest at night, and other hygienic measures were all resorted to, but the woman steadily grew worse, until it was decided to empty the uterus. In the thirteenth week, therefore, the cervix was packed with iodoform gauze, with the woman in Sims' position. The vomiting immediately decreased, and in twenty-four hours ceased entirely. Abortion did not take place, and the woman went on for another twelve weeks perfectly well. Then vomiting began again as violently as before, and in the twenty-sixth week the gauze tamponade of the cervix was repeated. Once more the vomiting was greatly relieved, though not entirely stopped. A third time, in the thirtieth week, vomiting became so severe that the cervical tamponade was used, and following this the vomiting again ceased entirely: In the thirty-third week, the vomiting recurred, and Kehrer decided, as the child was viable, to terminate the pregnancy. He did so, obtained living child that thrived, and the mother made a good recovery.

Vomiting of pregnancy can usually be relieved by a twenty per cent. solution of menthol in olive oil. The dose is ten drops, to be taken on sugar.

# Medical Society Proceedings.

## MONTREAL MEDICO-CHIRURGICAL SOCIETY.

*Stated Meeting, November 21st, 1898.*

J. G. ADAMI, M.D., PRESIDENT, IN THE CHAIR.

Drs. A. D. Stewart, D. A. Shirres and I. C. Sharp, of Montreal, were elected ordinary members. Drs. Schwartz, Peters, Smith, Brown, Patterson, Harvey, Lynch and Thomas, of Montreal General Hospital, were elected temporary members.

### A CASE FOR DIAGNOSIS.

Dr. J. A. SPRINGLE exhibited a child with multiple firm tumours of the hand. In the absence of a histological examination, he had been unable to make a diagnosis, but, having received permission to remove one of the growths, would report the result at the next meeting.

Dr. F. J. SHEPHERD had carefully examined the case, and could come to no definite conlusion regarding its nature. From its course he thought that it must be infective, and the diagnosis lay between a fibrous, a tuberculous or a sarcomatous condition. He did not think it was syphilitic. The question would have to be decided by a histological examination.

### TUBERCULOSIS OF THE FALLOPIAN TUBES.

Dr. F. A. LOCKHART reported this case, and showed the specimen.

Dr. LAPTHORN SMITH thought this was likely a case of pustubes in which the pus had become inspissated. The first constriction had been probably the one at the uterine end, and this had cut off the cavity of the tube from the uterus, and later the second constriction had developed, giving rise to the separate tumours. He considered that the operator had done well to leave the ovaries; it showed well-timed conservatism, and, even if pregnancy did not occur, the patient was freed from the nerve storms and other discomforts of a premature menopause.

Dr. LOCKHART, in reply, said that the tube was lying quite free in the pelvis, and there was no sign that adhesions had ever taken place, so that there was no possibility of Dr. Smith's ingenious explanation being the correct one.

### Carcinoma of the Ovary.

Dr. F. A. L. Lockhart read the report of the case, and Dr. D. P. Anderson demonstrated the pathological specimens from it.

Dr. Lapthorn Smith referred to a similar case of his own in which operation had meant three months more of life to the patient and a comparatively easy death. He thought that operation was justified in these cases even from that consideration alone. He asked if there had been any fluid found free in the peritoneum, as in nearly every case in which he had found fluid free with tumour, that tumour had proved to be malignant.

Dr. Lockhart said that there was no fluid in the abdomen.

### Intestinal Obstruction.

Dr. F. J. Shepherd reported this case.

Dr. James Bell said that the question of intestinal obstruction following abdominal operations was becoming an important one, owing to the frequency with which the abdomen is open nowadays. He referred to a case recently under his care: A woman aged 32, who had had a double ovariotomy performed on August 26, and had made a good recovery and kept quite well (with the exception of intestinal symptoms) until October 13. At 2 a.m. of that day, symptoms of obstruction set in and persisted until the operation, 83 hours later. On opening the abdomen he had found a foot and a half of the small intestine at about one foot above the ileocaecal valve, coiled up and adherent. The intestine above was distended to the size of a coat sleeve and quite black, while the adherent portion was not larger than the little finger. He had separated the constricted part and disentangled it, but, on returning the distended portion of intestine, his finger had perforated it, and a gush of fluid fæces took place. After washing up, the rent in the intestine was repaired, and recovery took place without a bad symptom. The speaker thought the fact that these cases get permanently well was most extraordinary. on account of the damage done to a considerable portion of intestine. This made the third case that he had operated on under similar circumstances with recovery.

Dr. Bell furthermore advocated evacuation of the bowel in these cases. The portion above the obstruction was always found full of liquid fæces and kept up the distension, and drainage and irrigation were an important part of the operation. One often hesitated about opening the intestine on account of the impending gangrene, which made one dread being unable to suture it satisfactorily.

Dr. A. Lapthorn Smith had opened the abdomen five times for obstruction. One of these was for a knuckle of small intestine caught by adhesions to a raw place left by detaching omentum, and on freeing these the vermicular movements had at once carried off the contents. The intestine was enormously distended above this point, but collapsed below it. In another case, on opening the abdomen, he had found the bowel attached to the stump of an ovary, and separating the adhesions was all that was necessary.

He suggested to Dr. Shepherd that some of the dangers of an operation of this kind could be reduced by having made, the same size as the operating table, a pan of hot water to be kept at a temperature of 110° F. There would then be less difficulty in keeping the intestines properly warm while outside the abdominal cavity, and the patient would leave the table warm, instead of with a temperature lowered to 96°, as was often the case.

Dr. WESLEY MILLS suggested that when hyperæmia in the region concerned in this case was not to be explained on obvious mechanical principles, the nervous system was to be interrogated. The splanchnic region was that so much used by nature to regulate the blood pressure and relieve the heart; it alone, as physiology had demonstrated, could contain all the blood of the body, and its importance in the vital economy,—even in the maintenance of life itself,—recent experiments had rendered clearer than ever. Considering the rapidity of the changes after the unfortunate conditions had been altered, it seemed highly probable that the restoration of a normal circulation in the intestine was to be explained through the action of the vasomotor centre by means of the splanchnic and other nerves of the sympathetic system. The abnormal condition of the circulation, as well as the restoration to the normal, was probably brought about reflexly, though the direct action of toxins, etc., on the nervous centres as a cause of the hyperæmia was also to be considered.

Dr. SHEPHERD, in reply, said that Kocher looked upon the congestion as due to hyperdistention of the intestine, and claimed that he could produce the same condition in animals by distending the intestine with gas. With regard to the volvulus, he had never seen or read of a similar case, but had not looked the matter over.

## FUNCTIONAL HEART MURMURS.

Dr. James Stewart read a paper on this subject by Dr. MAUDE ABBOTT.

Dr. W. F. HAMILTON expressed his admiration for the character of the work displayed in the paper. So full of important details is it that, in order to derive the full benefit therefrom, one must peruse it thoughtfully and meditatively. To all interested in the study of cardiac cases such observations are especially helpful.

He regretted, however, that more attention had not been paid to the character of the cardiac sounds, for much aid in diagnosis may be thus obtained. The division of cases into anæmic and non-anæmic class was of doubtful utility since the division was not made in many instances by the hœmoglobinometer, but by the general appearance of the patient.

Again no reference was made to the posturing of patients as a means of diagnosis between functional and organic murmurs.

These remarks were not meant to detract in any wise from the value of the paper. Such features as these could only be secured by a careful supervision of all cases presenting cardiac murmurs with the end in view, viz., that of distinguishing the functional from the organic murmurs.

Dr. J. B. McConnell had listened with both pleasure and pride to the excellent paper from his former student, Dr. Abbott. The paper pointed to the great importance of having careful detailed reports of all cases in our hospitals. He was a little surprised that no reference occurred in it to cardio-pulmonary murmurs. Potain claimed that most of the functional murmurs were of this class, and a large proportion of those hitherto regarded as cardio-hæmic and cardio-vascular. They are heard chiefly in the pulmonary area and over the conus arteriosis, as antero-posterior excursion during the cardiac systole is greatest here. The murmur is caused by compression of the lung against the chest wall during the heart's systole or during the diastolic phase by aspiration of a portion of the lung lying in contact with the heart. The murmur may be heard at all periods of the cardiac cycle, presystolic, systolic, telesystolic, diastolic and telediastolic. They can as a rule only be diagnosed byexclusion, and they usually disappear on forced inspiration or expiration, and sometimes in the horizontal position. That hæmic murmurs existed and depended on a changed relation between the vessel and its contents would seem improbable from the fact that such changes would be expected to show themselves by a murmur in the aorta where the pressure is very much greater than in the pulmonary artery. The absence of hypertrophy was a point in diagnosing a cardio-pulmonary murmur, but this, he thought, could only apply to the systolic variety which is usually explained by supposing a relative mitral insufficiency to have occured, and they would occur the more readily if the heart was enlarged, because the heart would more likely impinge upon lung then. In a case he had examined about a week previous, where from excessive bicycling there was hypertrophy but no valvular lesion, he was able to make out cardio-pulmonary murmurs. Their innocence in many cases made it important to diagnose them from a life insurance point of view.

The President held it a matter over which the Society might well congratulate itself that the first communication addressed to it by a medical woman was of such high scientific value. Although Miss Abbott very modestly depreciated the value of the results obtained by her, undoubtedly those results must receive wide attention and be the basis of yet other researches in other hospital records and other hospital wards. It is painful to think how much material of the utmost value is stored away in our hospital reports—material which only needs to be carefully collected in order to yield results which must establish the name and reputation of whoever will give the necessary time. For all methods establishing facts and theories in medicine, the statistical stands pre-eminent. Granted only that observations have been honestly recorded in the clinical notes, an observation, of relatively small value in itself as establishing any point, becomes most important when treated as a member of a group. For himself he became impatient with the blind folly of too many of the younger members of the profession in our larger hospital towns in thinking that they will more likely ensure a competence and a name by sitting still in their office waiting for practice to come to them instead of going forth to do some piece of

work in the wards or registraries of the hospitals, work which conscientiously performed not only strenghtens the individual and renders him a more capable member of the profession, but also must bring him into favorable notice and help him onwards. For the beginner in the medical research nothing is simpler, few things more valuable, than to work through hospitals records in order to establish or refute one single point. It was only necessary to read that most popular and valuable of all modern works upon medicine of which, and of the author of which, Montrealers are so proud, to see how its value depends upon the constant adherence to the statistical method. He could assure the younger members of the Society that they would find every opportunity given to them at both of the larger English hospitals to carry on such work.

Coming to Dr. Abbott's own work, in his opinion the most important results achieved was the light thrown upon the causation of functional murmurs by the study of cases, such as those of pernicious anæmia, in which we know that the heart muscle itself is affected, as compared with others in which no such affection is reasonably to be anticipated. This alone, in a subject so obscure, is an advance of high value.

## Iniencephalic Monstrosity.

Drs. H. S. Shaw and D. J. Evans then exhibited the body of an apparently full time female infant which was an almost perfect specimen of *Iniencephalus*.

The whole aspect of the specimen was that of a "Brownie."

The head was well-formed, but, owing to lack of development of the neural canal throughout nearly its whole length, the occipital and sacral regions were in direct continuity. Just at their junction below the hair of the scalp was a small meningocele. The face was well formed and directed upwards. Anteriorly the chin seemed to extend to the sternum, there being no neck. The chest and abdomen were well formed. The extremities seemed to be unusually long, and were free from deformity.

Photographs had been taken of the specimen. Frozen sections of the monster would be made and studied and a later report made to the Society.

THE
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# Editorial.

## PATHOLOGY OF EPILEPSY.

Among the numerous pathological conditions about which unsettled opinions prevail, epilepsy is prominent. A distinct niche has been made by the labour of Dr. N. Krainsky, physician in charge of the Department of Psychiatry at the Government Hospital at Charcow, Russia, the translation of which appears in the October number, '98, of *The Alienist and Neurologist*.

His work is on the line of an attempt to elucidate the metabolism of epileptics. He refers to the work of Haig, who demonstrates the close connection of migraine and epilepsy with variations in the excretion of uric acid, and that of a number of others who have studied the variations in the toxicity of the epileptic's urine, due to the seizures, and the many statements suggesting intoxication or auto-intoxication as a cause. In 1894 he began researches with a view of investigating as completely as possible the metabolism in different forms of epilepsy and to study metabolism under different forms of treatment. He found the quantity of uric acid markedly lowered before the seizure, but after it was equally increased, but he does not agree with Haig that the seizures are due to the infiltration of uric acid into the blood. In 1895 he began a more exact study of the variations in the

excretion of uric acid with respect to the epileptic seizures, and proposed :—

1. To determine by means of recent, not previously examined epileptics, the constancy of this manifestation.

2. To confirm this connection by several exact quantative methods for determining the uric acid ; and

3. To see whether it was not possible to predict, by means of these variations, the occurrence of the epileptic seizure, which I had already done several times in my first paper. These investigations showed :—

1. That the connection, in the sense above stated, between the variations in the uric acid excretion and the seizures is constant.

2. That the three methods for determining the uric acid I employed (those of Ludwig, Haycraft and Hopkins) are adapted to determining the variations mentioned with exact work and chemically pure reagents, and

3. That it is almost always possible, by means of these variations in the excretion of uric acid, to foretell the occurrence of the epileptic seizure.

Hence, he believes he is justified in regarding this connection as a manifestation constant in epilepsy, which is subject to several special deviations, *e. g.*, in patients having daily seizures.

A diminution in the excretion of uric acid certainly precedes every seizure ; usually occurring twenty-four to forty-eight hours before it. He regards the occurrence of a seizure without such a diminution as impossible, and believes that epileptic seizures will not occur when 0.6—0.8 grms. of uric acid are excreted daily. If the daily quantity of uric acid excreted falls below 0.45, or especially below 0.35, a seizure is usually to be expected with certainty on the third day. On the following, second, day the quantity of uric arid is often normal ; on the third day a seizure occurs with a marked increase in the quantity of uric acid, which usually corresponds to the preceding diminution. Consequently there is no change in the actual amount of uric acid, but only in the time of its excretion, in that the previously diminished excretion is compensated for by the subsequently increased elimination.

He thinks, in some cases, the organism can rid itself of the retained uric acid without a seizure, but may occur in another form when the organism is unable to excrete the uric acid, such as attacks of migraine, epileptic mental disorders, convulsions, twitching and vertigo. The uric acid sometimes falls below the normal for several days preceding the attacks instead of one, and, he further states that a relation exists between the lessened quantity of uric acid and the intensity or number of seizures, about 0.25 grs. being usually retained before every seizure, but if 0.3 several seizures or a violent one may be expected.

Thus the fact of the connection between the seizures and the excretion of uric acid is fully confirmed. He believes he may claim that without a variation in the excretion of uric acid an epileptic seizure cannot occur, and that with the quantity of excreted uric acid remaining constant day by day, the epileptic does not have to fear a seizure.

Irrespective of the facts cited that the epileptic seizures are dependent on the excretion of uric acid, it is scarcely possible to explain the significance of uric acid and its excretion to the organism in our present state of knowledge.

Only one would prove possible, and that is: not to consider epilepsy a purely "nervous" disease, but as an anomaly of metabolism, which has its basis in a contamination of the organism by a product of metamorphosis.

There is no doubt that in such a complicated laboratory as the animal organism, under varying conditions an endless series of deviations in the chemical reactions is possible, and that a discretionary combination formed in the given case may occur either as an indifferent agent or as a more or less virulent poison, according to its properties or its conditions of origin.

Still, if an opinion was to be expressed from the facts acquired, it would be the simplest to assume that in epilepsy several deviations occur in the mode of reaction in metabolism, which are actually manifested in lessened production and excretion of uric acid.

As soon as this abnormal reaction attains a certain intensity, a toxic product acting on the central nervous system

arises, which produces an irritation of the convulsion centres and the epileptic seizure. It is very possible that the epileptic seizure itself produces the conditions (accumulation of $CO_2$ in the blood, change in the blood's reaction) so that the further continuance of the abnormal reaction is impossible and the metabolic processes now proceed in their normal manner.

In this way the formative product of metabolism, which induced the epileptic seizure, is again destroyed by the latter. The formation, as well as the destruction of this substance, is closely connected with the formation of uric acid, in that they are manifested in a diminution and an increase of its excretion, dependent on the seizures.

With such a hypothesis, it is perfectly clear why all the uric acid retained before the seizure is excreted after it. From this point of view the seizures may be regarded as a sort of safety-valve for the epileptic, as soon as the vital reactions of the organism become abnormal under this or other conditions.

He thinks that if uric acid as such played an essential role in the pathology of epilepsy, pharmacological agents which favor its elimination would be of service, but peperazin lysydinum were negative. Lithium carbonate in medium doses (1 gr.) had a favorable effect, but 6 grs. made matters worse, and it had not really increased the uric acid elimination, hence its action consisted only in creating conditions in the epileptic's organism in consequence of which the abnormal reactions causing the seizure could not occur in the same degree as heretofore.

All this leads us to the hypothesis that the cause of the seizures is to be sought neither in the uric acid nor its accumulation in the blood. Very probably the elimination of uric acid is to be regarded as a product and indication of reactions in the epileptic's organism as yet wholly unknown to us, which after reaching a certain intensity are manifested in seizures Whereas the seizures must be regarded as a means of self-protection of the organism against the abnormal reaction, which otherwise would unavoidably lead to its destruction.

The only pathologico-anatomical changes Dr. Krainsky found in epileptics were irregularities in development and some asymmetry of the skull; otherwise, only the signs of asphyxia are found. By experiment, he proved that the poison was not in the brain but in the blood. Blood taken from a patient during the status epilepticus and injected into a rabbit produces paralysis of the lower extremities after which periodic seizures occur, and the animal dies in 4 to 6 days, but, if taken during the interval or soon after a seizure, no symptoms are observed.

A third result observed after injecting 5 to 10 cc of epileptic blood was that the rabbits remained well for a few days, but sickened after 2 or 3 weeks, emaciation, paralysis and coma occuring.

Dr. Krainsky does not think the toxin is uric acid. He believes that the nature of epilepsy consists, not in a retention of uric acid, but in a change in its conditions of origin. Hence the analogy given by Haig and the pathology of epilepsy identical with gout is to be changed in the sense that gout is merely an anomaly of the excretion of uric acid, while epilepsy is an abnormality in its formation, even though both diseases, so different in their nature, show the same changes in the uric acid contained in the day's quantity of urine.

In regard to uric acid he shows that it is not a product of the insufficient oxidation of the nitrogenous elements, but that it is formed from urea and nuclo albumen.

We then represent the formation of the uric acid in the organism in the way that different tissue elements—probably those containing nuclear bodies—form substances among the waste products approximating perhaps oxalic acid, or are characterized by the presence of an acid radicle in their molecules, which are not excreted from the organism as such, but immediately enter into a synthetic reaction with the urea already existing in the tissues, and, corresponding to the above equation, fix, as it were, a certain quantity of it. The uric acid arises as a terminal product of the re-action; as intermediate products – oxal uric and parabanic acids and other ureides and uro-acids.

As to the nature of the substance which is not of the

uric acid group, but of one of the elements forming the latter, he lays down five propositions to which this substance should conform, and seizes upon carbamate of ammonium as the likely one. It accumulates in the blood until it produces a seizure; during the seizure it is transformed into urea with loss of a molicule of water. Carbamate of Ammonia is a very unstable white powder; by taking up a molicule of water it is transformed into ammonium carbonate. Drechsel found carbamic acid in the blood. He considered it resulted from the decomposition of the albuminous bodies into leucin tyrosin glycocal ammonia, etc., which in their oxidation produce carbamic acid, which later combining with sodium, decomposing under the action of a ferment into urea and carbonate of sodium.

Experiments by Hahn, Massen, Nencki and Pawlow, in which an Eck fistula was produced by joining the portal vein and vena cava. Symptoms of poisoning resulted resembling that produced by carbamate of sodium and calcium when introduced into the blood, viz., somnolence with ataxia, excitement with ataxia and blindness, catalepsy with anæsthesia, epilepsy and tetany. The carbamic salts caused no symptoms when given by the stomach, but in dogs with an Eck's fistula carbamate of sodium produced a marked intoxication.

Dr. Krainsky experimented himself with carbamate of ammonium, given subcutaneously, and found symptoms very much resembling epileptic attacks, and acted much like the blood taken from a patient during an epileptic attack. He found, however, as others did, that much the same effects followed similar use of other ammonium salts, and after numerous experiments he concludes that it is the ammonia and not the carbamic acid that produces the intoxication. But the ammonia in all probability he thinks manifests its effects in the form of carbamate of ammonium, in which form its exists in the blood, but also as a carbonate of ammonium the latter produces depression and somnolence and the former the convulsive seizure and the epilepsy. In ordinary eclampsia the carbamate of ammonia arises primarily, and is the cause of the attacks, while in uræmia it is formerly secondarily from ammonium carbonate.

He concludes, therefore, that the nature of epilepsy consists in a periodical formation of carbamate of ammonium in the organism, which produce the seizures, and is decomposed into urea and $H_2O$ during them. The use of the bromides in epilepsy is explained by their action in decomposing the carbamate of ammonium and forming ammonium bromide and carbamate of potash and soda—harmless substances—the ammonium bromide is only toxic in large doses. The chief benefit of the bromides is from their alkaline base, which replace the $NH_3$ in the carbamic acid compound.

Dr. Krainsky found large quantities of carbamic acid in the blood of epileptics; small amounts exist normally. Ammonia was also found abundantly in the blood during the epileptiform seizures.

These valuable investigations are intensely interesting, and confirm the impression entertained by not a few that many obscure pathological problems will only be solved by the experimental methods of organic chemistry.

# Correspondence.

## WANTED: PROTECTION FROM ADVERTISING QUACKS.

*Editor of* CANADA MEDICAL RECORD:

DEAR SIR,

Many of us voted against the late officials of the College of Physicians and Surgeons at the recent elections because we felt that they cared nothing for the welfare of the regular profession. They took unceasing and untiring care to collect several thousand dollars yearly from us, but as far as I can ascertain they did very little for us in return. Quacks could come and fill the columns of the daily press with insults and untruths, calculated to lower us in the esteem of the public, and then by false and fraudulent claims extract many thousands of dollars from the people, after which they went on their way rejoicing to seek a harvest in some other field, while the regular practitioners have had to remain behind and treat the victims of these quacks gratuitously. The only ones our Provincial Board ever prosecuted were not the quacks, but the honorable graduates of our best

universities, who, having failed to pass their matriculation, could not obtain a license, and these gentlemen were hunted down without mercy.

In Ontario the Provincial Board has the welfare of the profession at heart, and, as a result, these quacks are quickly compelled to leave that province, its Board paying a detective and assuming all the expenses of protecting the regular profession from such unjust competition. I have waited patiently in the hope that our new board, in whom we all have great faith, would set about remedying this crying evil, but I presume that their attention will only have to be called to it in order to have them take the matter up at once.

The greatest grievance that I have is the company, a concern owned, as I am informed, by a layman in San Francisco, who, by his unscrupulous methods, has amassed a fortune within a few years. This company employs women to go around and find out every woman who is under medical treatment by a regular practitioner, and persuades her to leave him and put herself under their treatment. On several occasions my patients have informed me that these touts have forced their way into private houses even when told distinctly that they were not wanted. One patient with a large ovarian tumor, who had arranged to have it removed, was assured by one of these *Viavi* women that their medicine would cure her, and the unfortunate woman, hoping to avoid an operation, believed her, and is now a hopeless case. It was a strange retribution of fate that one of these agents, after causing the death of many women by preventing them from being treated, herself died recently from cancer of the womb due to a neglected lacerated cervix. In two other cases, one a lady with a large ovarian cyst and the other with a large fibroid who have been cured by operation and are now in excelleut health, were besieged by as many as three agents in one day who hung on to them until they were leaving their houses to go to the doctor. How are we to hold our own against such enemies as these? Is it to the public interest that a foreigner who is not even a physician should practice here without a license? And he does not even practice himself, but he employs great numbers of unlicensed and unqualified assistants to practice for him.

There are two physicians here in good standing who were prosecuted by the late board for employing their brothers as assistants, although these assistants were McGill graduates, because they had no license. The other grievance will speak for itself; I take it verbatim from the Montreal *Star*, the 8th of January, 1899:

Travellers in France have come back to this country with wonderful stories of the beauty of the French women. They are blessed with vigorous systems. Their complexions are coloured like the peach. Their eyes sparkle with the fire of health. Their figures are well rounded and symmetrical, They are neither too thin nor too fleshy. They captivate the opposite sex with their charms. This is true, not only of girls and young women, but also of women who have become grandmothers. Age seems to leave no traces upon their faces. To the very last they preserve that attractiveness which so many in this country lose soon after marriage. There is a reason for everything. There is a reason why women of France should be so charming and healthy. It is to be found in the fact that French physicians have brought the standard of womanly health up to its present plane, through their marvellous skill in overcoming what is commonly called "Female Troubles." They have for generations studied the subject deeply and exhaustively. They have given a hundred times more thought to the subject than physicians in this country.

Doctors in this country make the mistake of trying to master every branch of medicine. The subject is too vast, and they, of course, do not meet with striking success.

Doctors in France study one branch only, and thus become skilled and expert. All of them do not study women's diseases, of course, but those who do are the ones we are speaking of.

France is so far away that it is often impossible for women in this country to go there for treatment. The expense is too great. For that reason they have secured the services of a corps of the most famous specialists in Women's Diseases, who have made a thorough study of this branch in Paris. The services of these celebrated physicians are placed before the women of Canada and of the United States without any cost whatever. Just think what this means to mothers, wives, daughters, young girls and grandmothers. They can sit down and write a letter about their diseases, sufferings, symptoms and troubles, and send their letters to these specialists. In a few days they will receive a long letter in reply, giving them the most valuable advice, telling exactly how to get well again, and what to do to obtain this result, and there will not be a cent to pay. Think of that. The best physicians of Paris can be consulted absolutely FREE. All correspondence is held in the strictest confidence; no one ever sees the letters but the specialists themselves.

Are the men who paid for that advertisement licensed

practitioners? If not, why are they allowed to practice? If they are, why are their licenses not taken away from them for grossly unprofessional conduct? It is well known that the daily papers are largely supported by these advertisements, one quack having paid at the rate of five thousand dollars per column per annum. If it were for the public welfare that these quacks should flourish while the profession was starving, I would have nothing to say, no matter how great the hardship. But I know of so many cases in which the ignorant have been deceived and robbed both of health and money, and then been obliged to come to a regular physician and be attended gratuitously that I feel convinced, as I think all your readers are, that it is against the public welfare that this state of affairs should continue. At any rate, I hope that the ventilation of this grievance in your valuable journal may call the attention of the new Board to what is surely a crying evil.

Yours, etc.,

PRACTITIONER.

# Book Reviews.

**Histology, Normal and Morbid.** By Edward K. Dunham, M.D., Professor of General Pathology, Bacteriology and Hygiene, in the University and Bellevue Hospital Medical College, New York. In one very handsome octavo volume of 448 pages, with 363 illustrations. Cloth $3.25, *net*. Lea Brothers & Co., Publishers, Philadelphia and New York.

The author has in an admirable manner given us in clear and concise descriptions a comprehensive view of the latest conceptions of the minute structures or the human body in its normal state as well as when modified by the influence of diseases.

The description of the cell is particularly good, and the new terms of the various stages of karyokinesis are fully described and illustrated by excellent diagrams. The illustrations throughout are very good, and one can have little difficulty in gaining a clear idea of the structures of any portions of the body from the lucid discriptions given in connection with these unusually good cuts. The second portion describes the histological conditions found in atrophies, degeneration and infiltration, hypertrophy and hyperplasia, metaphasies, structural changes following damage and tumors. Part third, histological technique, although not lengthy, contains excellent advice in regard to microscopical technique, methods of fixation, hardening, impregnation, imbedding, cutting, staining and mounting, with some special methods in regard to the examination of urinary and other sediments, sputa for tubercle bacilli, urethral pus for the gonococcus, bacteria in cover-glass preparations and some micro-chemical reactions to determine the

chemical nature of objects under the microscope. While there is nothing distinctive or original about this work other than the idea of combining norn al and morbid histology in one volume, it is a reliable guide, and gives the reader an up-to-date idea of the subjects treated of.

**The Practice of Obstetrics.** By American Authors. Edited by Chas. Jewett, M. D., Professor of Obstetrics and Diseases of Children in the Long Island College Hospital, New York. Illustrated by 441 engravings, 34 of which are in colors and 22 colored plates. Published by Lea Brothers and Co., New York and Phila., 1899.

This work is contributed to by nineteen of the best known teachers and writers on obstetrics in America to-day. Each contributor has selected the subject on which he is supposed to be best posted, and the result is exceedingly satisfactory. When the American Text Book of Obstetrics was published, it was an advance on any existing American work on obstetrics; now we have another equally good work, and, as might be supposed, being of later date, an even more modern text-book. It would be difficult to say more in its praise. In many of the chapters most of the important statements have the authorities for such statements given in the foot notes, which we believe to be of use for advanced students. The plates are all good, many of them being entirely new. No library on obstetrics can be complete without this work, and we heartily recommend it to all practitioners, and more especially to all teachers as being the best work to keep their students abreast of the times.

# PUBLISHERS DEPARTMENT.

## AMERICA'S PRETTIEST COUNTRY HOMES.

The first twenty-five of "The Prettiest Country Homes in America" are shown in the February *Ladies' Home Journal*. There will be over one hundred of these photographs, and they will picture in detail the most attractive and artistic country and suburban homes in the United States. The pictures that will constitute this series were selected from the photographs of seven thousand of the prettiest American homes. A competitive contest for a photograph of the prettiest house in this country brought a picture of every home having any claims to attractiveness or beauty, and from these the very best were selected for publication in *The Ladies' Home Journal* exclusively. Houses of all sizes, from every section of the country, of various costs, have been selected, and the series will be valuable for suggestions to those who contemplate building a house or remodeling an old one.

## A RELIABLE NON-POISONOUS DISINFECTANT.

The several cases of smallpox, so widely scattered in the Sister Province, bring the necessity of the free use of reliable disinfectants to the front, and the profession here are already finding that Jeyes' Fluid for general work, and Crenasol-Jeyes' for professional use, are the very best. They are considerably stronger than Carbolic Acid, but do not burn or stain, even when used pure. In smallpox these preparations have become well known, and the germicidal power is shown in a report from Dr. A. B. Griffiths, of London, Eng., which we reproduce as follows:—

(*a*) Silk threads were impregnated with the Micrococcus Variolæ et Vacciniæ, which were then immersed in Jeyes' Fluid of a one per cent. strength:

(1) The microbe was killed in 2 minutes.
(2) do do 2½ do
(3) do do 1⅝ do

or an average of two minutes.

(*b*) The following result was obtained with Jeyes' Fluid of ¼ per cent. strength:—

The microbe was destroyed in ten minutes.

(*c*) When diluted to 1 in 1,000, Jeyes' Fluid completely destroyed (killed) the microbe within thirty minutes.

From the above results, I am justified in stating that Jeyes' Fluid destroys the microbe, and will prove extremely useful in cases of smallpox."

## APPLETONS' POPULAR SCIENCE MONTHLY.

CONTENTS FOR JANUARY, 1899.—I.—The Evolution of Colonies. VI. Industrial Evolution. By James Collier. II.—The Mind's Eye. By Prof. Joseph Jastrow. (Illustrated.) III.—Nature Study in the Philadelphia Normal School. By L. L. W. Wilson, Ph.D. IV.—Principles of Taxation. XX. The Diffusion of Taxes. By the Late Hon. David A. Wells. V.—Our Florida Alligator. By I. W. Blake (Illustrated). VI.—The Racial Geography of Europe. The Jews. II. By Prof. William Z. Ripley. (Illustrated.) VII.—True Tales of Birds and Beasts. By David Starr Jordan. VIII.—Glacial Geology in America. By Prof. Daniel S. Martin. IX.—Modern Studies of Earthquakes. By George Geraland. X.—A Short History of Scientific Instruction. By Sir J. N. Lockyer. XI.—Should Children Under Ten Learn to Read and Write? By Prof. G. T. W. Patrick. XII.—Soils and Fertilizers. By Charles Minor Blackford, jun., M.D. XIII.—Sketch of August Kekule. (With portrait.) XIV.—Editor's Table: A Voice from the Pulpit.—Lessons of Anthropology.—An Example of Social Decadence.—The Advance of Science. XV.—Scientific Literature. XVI.—Fragments of Science. Edited by W. J. Youmans, published by D. Appleton & Company, 72 Fifth Avenue, New York.

## LITERARY NOTES.

The *Fortnightly Review's* brilliant article on Lord Rosebery as The Disraeli of Liberalism will be reprinted entire in *The Living Age* for Feb. 18.

The leading feature in *The Living Age* for Feb. 11 will be a striking paper on State Socialism, by F. Nobili-Vitelleschi, translated from the leading Italian review, Nuova Antologia.

The Etchinghan Letters, which are now running serially in *The Living Age*, are attracting wide attention by their range and their humor. They treat of everything, from cycling to theology, and with a brightness which shows that the art of letter-writing is not extinct.

One of the most valuable contributions to the recent litterature of child study is Professor James Sully's paper called "Dollatry," which *The Living Age* for Feb. 25 will reprint from the *Contemporary*. As the quaint title suggests, this is a partly serious and partly playful consideration of the attitude of children toward their dolls.

G. P. Putnam's Sons announce the publication of a new quarterly journal devoted to the interests of Anthropology. This periodical, which has been established under the auspices of Section H. of the American Association for the Advancement of Science (to which section is given over the study of Anthropology) will be issued under the title of *The American Anthropologist* (New Series). It will be addressed to the general reader, as well as to the specialist in the study of Man; every effort will be made to render it representative of the science of Anthropology in America. The divisions of the journal will include: (1). Original papers of high grade, pertaining to all parts of the domain of Anthropology. (2) Briefer contributions on Anthropological subjects, including

discussion and correspondence. (3). Reviews of Anthropologic Literature. (4). A current bibliography of Anthropology. (5). Minor notes and news.

Each number will contain 200 octavo pages, and will be fully illustrated. The subcription price per year will be $4 00; the price of single numbers will be $1.25.

The Board of Editors has been selected from among the most distinguished American authorities upon Anthropology. It will comprise: Dr. Frank Baker, Smithsonian Institution, Washinton, D.C.; Dr. Franz Boas, American Museum of Natural History, New York; Dr. Daniel G. Brinton, University of Pennsylvania, Philadelphia, Pa.; Dr. George M. Dawson, Geological Survey of Canada, Ottawa; Dr. George A. Dorsey, Field Columbian Museum, Chicago, Ill.; Prof. William H. Holmes, U. S. National Museum, Washington, D.C.; Major J. F. Powell, Bureau of American Ethnology, Washington, D.C.; Prof. Frederic W. Putnam, Peabody Museum, Cambridge, Mass.; Secretary and Managing Editor, F. W. Hodge, 1333 "F" Street, N. W., Washington, D. C.

## SANMETTO IN GENERAL NASO-PHARYNGEAL AND BRONCHIAL CATARRH COMPLICATED WITH GASTRO-INTESTINAL CATARRH, ALSO IN HYPERTROPHY OF PROSTATE, DYSURIA AND PAINFUL MICTURITION.

I have used Sanmetto in my own case, *i.e.*, general naso-pharyngeal and bronchial catarrh, with the invariable complication in all such cases, gastro-intestinal catarrh, with the very best results, and I frequently prescribe it in such cases with the most satisfactory results. I use it in all cases of hypertrophy of the prostate, dysuria, difficult and painful micturition, and such as need to have the genital tract braced up, with the very best results.

J. B. DUNCAN, M.D.

BEDFORD, IND.

## SANMETTO IN ENURESIS DIURNA ET NOCTURNA.

Some years ago my attention was called to Sanmetto as a remedy for troubles of the genito-urinary organs, particularly in men past middle life, and I have had some very gratifying successes with its use. Recently I was called upon to prescribe for two boys, eight and ten years of age respectively. Everything had been tried, including whipping, to break up the "habit" of wetting the bed at night, and one of them also his clothing in the day time. It occured to me that Sanmetto would be worth trying, and to the delight of every one concerned it has been perfectly successful; and now, for the past six months and twelve months respectively, these boys have been entirely cured of this unfortunate "habit." Undoubtedly the trouble was due to irritability of the prostate and mucous membrane of the bladder; hence the prompt and permanent relief afforded by Sanmetto. I have written these few lines hastily, calling the attention of the profession to these cases, with the hope that others will try the same remedy for the same "habit."

JAMES A. STEWART, M.D.

BALTIMORE, MD.

## LATE LITERARY NEWS.

The question of handling the wires and gas, water and drainage pipes in great cities, and even in towns, is becoming with each year one of greater importance. A prize was offered to the engineers of the United States by *The Cosmopolitan* magazine for the ablest article suggesting a scientific, economical solution of this problem. The paper of Henry F. Bryant has been selected by the committee as the one most ably meeting the conditions. It appears in the February *Cosmopolitan*.

"Some Plays and Their Actors.—Without Prejudice," is a new department in *The Cosmopolitan*. The names of the contributors are not given, but in the staff are embraced the majority of the leading critics of the country, including David Belasco. It is interesting to note that in these days of competition in the magazine field the editions of *The Cosmopolitan* have gone from three hundred thousand for February, 1898, to three hundred and fifty thousand in February of this year.