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MASSAGE IN SKIN DISEASES.

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While in general medicine the beneficial effects of massage are well known, in dermatology it has received but little attention. It has seldom been taken up in an article, and the dermatological text-books scantily mention massage. For this reason, deeming it worthy of more accentuation, I have ventured to bring the subject before the readers of THE RECORD.

Without the skin, its layers, complexus of nerves, lymphatics, etc., the massage treatment could not well be carried out, it seems but just that when the skin itself becomes diseased, it should lend a helping hand—come to the rescue.

Pardon me if I recall to your mind the physiological actions of massage. It improves the appetite, improves bodily vigor, promotes absorption by the lymphatics (of exudates, etc.), increases the circulation of the part, dormant capillaries are aroused, the vaso-motor nerves are stimulated; as more blood passes through the massaged region it causes an increased interchange between the blood and tissues. Massage equalizes the circulation, drives the blood over the skin area, and relieves the internal organs—brain, liver, spleen, kidney, etc.—of their excesses of blood. Effleurage lightly performed contracts the superficial blood vessels locally; deep and persistent effleurage, together with petrisage, dilates them. Massage aids in the nutrition of the

part; assists digestion; increases the electrical contractility of muscular tissue; useful in removing waste products, and restoring muscular power; stimulates the flow of lymph in the lymphatics; promotes sleep; increases the oxidizing power of the blood; stimulates the sympathetic nervous system, increasing secretion and reflexly the activity of unstriated muscular fibre; relieves pain. Deep massage exerts a simultaneous influence on all the tissues within reach—the skin, fascia, muscles, vessels, nerves; the skin is made softer, suppler, finer, cleaner, smoother, and at the same time more tough, flexible, elastic; insensible perspiration when deficient is increased, and the sebaceous excretion facilitated. In the recent experiments of Lauder Brunton and Tunnicliffe on the effects of massage on the circulation, they found that it (1) increased the blood in the muscles; (2) increased accumulation of blood flow; (3) increased blood pressure and fall. Such are the principal physiological actions of massage (at present known), and to my mind there are many dermatoses where they might prove applicable.

Massage, then, may be said to be a skin tonic, as alterative, absorbent, sedative, antipruritic, skin exerciser, etc. (to coin an expression). Massage acts directly on the skin (local massage), or indirectly (general massage) extending over the whole surface, influencing the stomach, liver, alimentary canal, etc.

In looking over the dermatological classification, among its divisions there are many dermatoses which might be benefited by massage. As massage removes congestion, it should be useful in the hyperaemia, the erythemata. In acute dermatoses, it should not be used, as then it would have the same effect as scratching, barring the nails. The following are some of the skin diseases where it might be adopted: Dermatalgia, paraesthesia, dermatitis, congelationis, psoriasis; atrophy of the hair; scleroderma; sclerema neonatorum; morphoea; anidrosis; alopecia areata; eczema; acne; elephantiasis; symmetrical gangrene (Raynaud's disease); pruritus; prurigo; erythema pernio.

In ichthyosis, massage is a useful adjunct to other treatment. Comedones may be removed by massage, kneading and pressing out contents. In elephantiasis it keeps the lymph vessels and channels open. In acne, local massage is useful to free sebaceous glands. Scars remaining after burns

may be removed by massage. It may also alleviate the nervous symptoms following these. Oedema may be speedily removed under the impetus of massage. It ought to therefore prove useful in acute circumscribed oedema, or Quincke disease, a variety of urticaria. Billroth thinks he has seen tumors dissipated by massage. In cutaneous ulcers in the more chronic forms massage may aid in removing indolent infiltration, and set up a healthier action. In varicose ulcers in the accompanying eczematous conditions of the lower extremity, when poor circulation (venous and arterial) is a prominent feature, by increasing the circulation of the part, aiding the nutrition, and tending to the absorption of exudates, it may be of especial service.

In seborrhoeal affections, massage by removing the crusts and stimulating the sebaceous glands to greater effort is of benefit. In the dry forms of seborrhoea, massage is beneficial. Tone and vigor is given to the glands and hair follicles. In acne indurata, glandular swelling, excessive and deficient pigmentation, the choked-up absorbents are aroused to action, and the parts soon restored to their normal condition. Murray, of Stockholm, found that massage had a good effect in relieving the itching of prurigo.

Massage is a valuable adjunct in promoting and increasing oxidation in psoriasis and the scrofuloderma. In these and like pathological conditions the skin is rendered more active, the red corpuscles of the blood are increased and effete products removed. In some of the subacute forms of eczema, where there are grouped papules thickened and dry, massage will frequently wake up into activity the absorbents, lessen or arrest the itching, increase the circulation and restore the skin to its normal condition. It is more effective in the chronic forms of eczema, when there is a deeply infiltrated, rough, thickened, leatherly-like, hard, dry skin, and where other treatment may have failed. It is equally efficacious where the integument is covered with confluent patches of papules, or more or less infiltration of the surface, with dryness of the surface, accompanied with intense itching. The pent-up products are removed, and, massage having a sedative action, a feeling of repose follows.

In Lupus, Unna frequently uses massage as an adjunct to other treatment, using moderate friction. Cicatrices may be removed by continuous friction with fine sand pumice stone. Molluscum contagiosum, the tumors may be kneaded out.

Massage increases the nutrition and circulation of the scalp. It acts as a scalp stimulant and tonic. As the scalp is strengthened, so is the hair. It increases the circulation of the hair capillaries; more blood is brought to these. It acts as a stimulant and nutrient of the nerves of the hair. It is therefore useful in alopecia-atrophic conditions of the hair; shaft trichorrhexis nodosa; atophia propria pilorum, etc. If alopecia areata is a neurosis, as most dermatologists hold it ought to be of use here, when the scalp has become atrophic and immobile, it might do good. The hair becomes more moist and glossy after massage of the head.

In the treatment of the neuroses of the skin the neurologist and dermatologist meet on common ground. It is of especial use in the neuroses, that much unexplored and ever-widening branch of dermatology.

Pruritus.—Massage often acts like a charm in removing the intolerable sense of irritation and itching of the part. Most of the methods of performing massage may be used: Stroking (*effleurage*); pinching or kneading (*petrissage*); friction; percussion (*tapotement*), and should be performed over the general surface as well as the affected one, as it equalizes the circulation; removes exuded products; nullifies, through its sedative action, all nervous irritation, and is most refreshing, often procuring sleep when soporifics fail. It may prove useful in hyperaesthesia, dermatalgia and all trophic disturbances of the skin. The dermato-neuroses, with predominant inflammatory congestions (*Auspitz*), herpes zoster, herpes, pemphigus, eczema neuroticum, etc., ought to be benefited by massage, especially of the spinal column.

Besnier, Brocq and Jacquet, of Paris, and still later Leloir, of Lille, have described a large number of neurodermites in which massage might do good.

In drug eruptions, as they are for the most part thought to be due to nervous influence reflex or otherwise, massage might be of benefit.

Massage proves useful in a number of uterine derangements, menstrual disorders, etc. As is well known, not a few dermatoses are due to these, which would be indirectly relieved by massage. In anaemias of the skin, massage is useful. It might aid in removing the syphiloderms more rapidly, and the debility which frequently accompanies or follows syphilis.

It is beneficial in the exudativus, a class largely repre-

sented in dermatology. Massage removes crusts; gout and rheumatism are much benefited by massage. These are etiological factors in a number of dermatoses. In removing the cause we are curing the disease.

As a Skin Exerciser.—There are a class of patients of sedentary habits who take little exercise of any kind out of doors or indoors. Then, again, there are those whose occupations do not permit them to do so; consequently they suffer from a variety of skin diseases—acne, eczema, etc. To them, it seems to me, massage would prove a boon, making the skin and muscles more active, while at the same time quickening the action of the internal organs—stomach, liver, spleen, etc. Constitutionally, when applied over the general surface, it cures dyspepsia, constipation and functional derangements, which indirectly give rise to skin troubles. It affects the nervous, digestive and circulatory systems. These are etiological factors in many dermatoses.

In a paper read before the Dermatological Section of the British Medical Association, in August, 1893, Dr. Symons Eccles, of London, brought out some good points in reference to massage to the skin. Light friction produces apparently the same effects as the application of cold to the surface of the skin, but whereas the initial effects of cold, thermal and mechanical stimulations are identical if the former is prolonged, the cutaneous circulation of the part is slowed, congestion, overfilling of lymphatics, and consequent tumefaction of the part ensues, while with continued friction contraction of vessels is replaced by relaxation, pallor by warm redness, and if manipulation is increased to firm rubbing, the loose epithelium is removed; contents of sebaceous follicles expelled; dilation of arterioles; insensible sweating and perspiration ensue; lymph vessels unloaded; venous circulation stimulated. Light friction reduces surface temperature. Firm friction, kneading and rolling of skin increases the surface temperature, also the temperature of the limb on opposite side. Light friction produces no perceptible effect on the sensation of the skin. Firm friction increases tactile sensibility, and improves local sense. Kneading immediately reduces both; also temperature sense for heat, less for cold. Massage of the part decreases the resistance of the uninjured skin to the passage of electrical currents. Preliminary massage increases the rapidity by which drugs are absorbed. Dusting powders used after massage are more

efficacious than inunction without massage. Indirectly, massage may be employed over the vaso-motor-centres controlling the vascular conditions of parts affected by skin lesions. Friction and kneading over the cervical and dorso-lumbar regions, and along the erector spinae, appear to modify inflammatory conditions of the upper and lower limbs respectively, while abdominal kneading affects the peripheral tension.

It is in lesions characterized by the accumulation of inflammatory products in overloaded lymph spaces, clogged lymph channels and blocked glands, that massage proves most valuable. Three questions loom up: (1) As to the time needed to perform massage; (2) as to the skill needed for its performance; (3) as to its expense.

To the busy practitioner it is out of the question. To the less occupied it is practicable. As to the skill needed, if one has the time, one can easily acquire the necessary acquirements; but perhaps it would be better to leave it in the hands of a skilled masseur. Massage of the head might be relegated to the barber; he would then have an additional interrogation: "Massage, sir?" The expense would deprive many of the poorer class of patients from its benefits.

While disclaiming for massage great curative powers, it certainly has its use and place in dermatology. While taking from one's shelves the ponderous volumes of reference in search of a line of dermatological treatment, the thought may possibly crop up, "Aye, there's the rub."

FOODS—THEIR USE IN DISEASE.*

By GEORGE FISK, M.D.

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In the organic world the process of decay and repair is ever going on, and repair demands material, i.e., food. A perfect and complete food for any living thing must necessarily comprise all the elements utilized in the formation of its tissues, and that these elements be supplied in sufficient quantities. The simplest vegetable organisms require for their food nothing beyond water and the gases of the atmosphere; but man is a very complex organism, and from the thirteen constant elements, and the ten other occasional elements found in the human body, many very complex chem-

* Read before the Montreal General Hospital Clinical Society, March, 1896.

ical substances are formed. Of these elements some are in small quantities, and their uses are unknown; several are found more abundantly, but are not indispensable to life, while carbon, hydrogen, oxygen and nitrogen are necessary ingredients, and constitute the greater portion of the body. Modern science has placed the study of foods on a scientific basis by its extensive chemical analyses of the human body and its secretions, as well as an exact analysis of all foods, however prepared. With this foundation, it but remains for the student to investigate the ease of digestion and assimilation of whatever class of food is indicated.

This is certainly a very broad subject, and it is here that the old saying, "What is food for one is poison for another," appears in its true light.

The varying conditions of the human body in health and disease exert such a powerful influence on digestion and assimilation, that a systematic classification, so useful to the busy practitioner, must necessarily be incomplete and imperfect; or, on the contrary, so elaborate as to be impracticable. The classification of foods, according to their physical properties, source, or chemical formation, is very good in studying the foods by themselves, but in studying foods with regard to disease, a classification, designed to group foods according to the role they take in the formation of the human system, is to be desired. As the great objects of food are tissue formation and force production, a classification of foods as acting in one of these ways may prove practical. Chemistry shows that the nitrates are occupied largely in the formation of muscle, the phosphates contribute to the formation of the brain, nerves, and to some extent of the bones, while the carbonates are the main source of force. Let us place the foods as acting in one of these three ways, according to their chemical formation, viz.:

1. Muscle formers, i.e., nitrates.
2. Nerve and brain formers, i.e., phosphates.
3. Force producers, i.e., carbonates.

The material for muscle formation is found largely in the cereals and animal foods, the percentage varying from 6.5 per cent. to as high as 34.6 per cent. Among the grains, wheat has 14.6 p. c.; barley, 12.8 p. c.; and oats, 17.0 p. c., while peas and beans have about 25 p. c. Butchers' meats vary from 17.5 p. c. in pork to as high as 35 p. c. for ham, most of them showing about 20 p. c. Fish show a smaller

percentage. The material for nerve and brain formation is found most abundantly in fish. Most fish contain from 3 to 7 p. c., salmon heading the list with 6 to 7 p. c. Grains contain a fair amount. Barley has 4.2 p.c.; oats, 3.0 p. c., and wheat, 1.6 p. c. The phosphates in barley and wheat are deposited on the surface of the kernel, just beneath its hard covering; but in oats it is distributed evenly throughout. The pearly barley is robbed of much of this layer of phosphates in the process of milling, only 0.2 p. c. being left. The flake barley retains much of this layer of phosphates, and consequently is much better for porridge. Butchers' meat contains about 2 p. c., and ham has 4.4 p. c. In fruits, dates are richest, containing 4.5 p. c. Beans contain 3.5 p. c. The force producers are made up principally of the carbonates, i.e., the carbo-hydrates (or, starches and sugars), and the hydro-carbons (or, fats and oils). The carbo-hydrates form a very large percentage of the grain and some vegetable foods, and by their ready oxidization save much wear of the tissues, although they do not readily enter into the formation of tissue. If we consider, then, that all foods, or the component parts of all foods, act in one of these three ways, our care should be to select those foods which best replace the loss in any special case. Here a knowledge of the constituents of the various foods is of vital importance, but this is not all that is required. A selection from the various foods which contain the required elements must be made according to—

1. The ease of digestion, and resulting percentage assimilated.

2. The value in tissue formation.

3. The effects of the residue, or waste, on the system.

The consideration of the first opens up a wide field in the preparation and cooking of foods in order to obtain a large percentage of nutrition from the food. Yeo, in speaking of the partial assimilation of vegetables containing a large proportion of nitrogenous substances, says: "As large a proportion of albuminous matters as 17 p. c. may be wasted, while not over 3 p. c. of the proteid matter of animal food remains undigested." Proper preparation of these vegetable foods will remove this trouble to a great extent, yet it is quite evident that the great mass of cooks do not prepare many vegetable foods rich in nitrogenous products in a manner to obtain its full value. To illustrate, it

is well known that the horse extracts more nourishment from oats than man does from the meal, as his powers of digestion are greater. If, however, the oatmeal be thoroughly cooked, from eight to twelve hours, a much larger proportion is assimilated, as the oatmeal granules are broken up and prepared for digestion. It should be a standing rule that wheat and oat porridge should not be boiled for less than eight hours, and on cooling it will form a tender gelatinous mass. Barley porridge is an exception, and a short time (fifteen minutes) suffices to cook it sufficiently.

Much that is valuable in vegetables is lost by faulty cooking. Potatoes peeled before boiling are robbed of their potash salts, which lie just beneath the skin. During the process of boiling the potash passes out into the water, and is thrown away with it. Carrots lose their valuable iron in the same way if sliced, and beets are said to "bleed to death" when the skin is broken. In acute and serious diseases the alimentation is more directly under the physician's supervision, resulting in a more correct preparation of food. Certainly the greatest aid to the physician in the improvements in modern dietetics is the predigestion of food. Its value in both acute and chronic diseases, especially of the alimentary canal, is hardly to be estimated, and the methods of feeding infants have been completely reorganized by it. Not to enter upon a lengthy discussion of the methods of giving predigested foods, I will mention a few facts that are easily overlooked by the uninitiated attendant in regard to nutrient enemata. It is a good standing rule that all albuminous foods should be digested before given as enemata, for, experimentally, albumen is shown to be excreted by the kidneys unabsorbed when injected into the rectum undigested. The practice of giving nutrient enemata with a common Davidson syringe, with a rubber or metal nozzle, cannot be too strongly condemned. Irritation of the bowel, possibly haemorrhage, and imperfect absorption, are the result. A long pliable rubber tube should be used; a large velvet-eyed catheter does very well, and this should be passed well up the rectum to the sigmoid flexure. About eight inches of tubing should be passed up in the child, and about ten to twelve inches in the adult. There is a good anatomical and physiological reason for this, as fluids absorbed from the sigmoid flexure and upper part of the rectum are carried to the inferior mesenteric vein

through the superior haemorrhoidal and sigmoid veins, and so on to the liver through the portal vein. The veins from the lower third of the rectum pass directly to the inferior vena cava, consequently all proteid matter absorbed from the lower one-third of the rectum loses the further digestion in the liver so vital to its assimilation. If injected into the sigmoid flexure it causes less irritation, and there is less liability to rejection.

In considering the digestibility of foods their compatibility should be considered. By incompatible foods, I mean those foods which demand a widely different length of time for the completion of gastric digestion. Apples take one and one-half hours, while beets or cheese take six hours. As quickly digested parts of a meal are ready for intestinal digestion they are passed on from the stomach, leaving the more tardy parts to complete digestion. It is quite obvious that if gastric and intestinal digestion are going on simultaneously for some time both are retarded.

The second division for consideration in the selection of food, viz., their value in tissue formation, is one that is frequently underestimated. Nature always accommodates herself as far as possible to circumstances, and employs whatever material is brought to her for renewing tissue waste. It is quite evident that if inferior material is furnished, the resulting new tissue is of poor quality. This is equally true in mental or physical training, and amounts to a maximum among teachers and trainers. Scrofulous or rickety children show in the various tissues the result of improper food. With regard to what foods make the best tissues, there is room for much discussion. Some hold that flesh food is not allowable for man, while on the contrary others hold that flesh is all sufficient. Thompson remarks that, "A man cannot perform more actual muscular labor upon an exclusive diet of animal food than of starchy food. He requires abundant animal food to replace the general wear and tear of muscular tissue, but the energy for muscular contraction is not derived from nitrogenous food, but from carbohydrates, the former being used merely to keep the muscles in a state of healthy equilibrium. He who is physically feeble, and who lacks muscular power, cannot restore that power by an exclusive nitrogenous diet. A man fed upon nitrogenous diet without vegetable food may not work as well in daily labor as when given a fair proportion of the latter; but, on

the other hand, he is better fitted for sudden arduous exertion than are exclusive vegetable feeders." Hence a mixed diet is the rational one for man.

Bauer says: "The material effects of albumen and of fat in the system are in a certain sense opposed, for the former increases the tissue waste, and secondarily, the oxidation, while fat induces the opposite effect." Hence the beef (lean) and bread treatment for obesity.

Some authorities claim that an exclusive vegetable diet has a tendency to increase the deposition of salts in the tissues leading to arterio-sclerosis; but the evidence in this is not at all conclusive. On the other hand a very large per cent. of centurians were very sparse meat eaters.

In considering the effects of the residue, or waste, on the system, I shall define the waste as that part of ingested food which passes off undigested, or is undigestible. The amount of undigested food which is thrown off varies according to the amount of food ingested at a time, and the condition of the food. In many poorly prepared vegetable dishes rather a large percentage of digestible material, is thrown off owing to its being protected by indigestible cellulose. If cellulose is added to animal food, digestion is interfered with. The carbo-hydrates in wheaten flour, rice, macaroni, etc., are utilized to within 0.8 to 1.6 per cent., whereas as much as 8 to 18 per cent. of undigested residue passes out of the body from such food as black bread, potatoes, and the like. Moreover, hard, lignous substances, such as the bran of black and brown bread, provoke, by mechanical irritation, active intestinal peristalsis, which soon removes these substances from the action of the intestinal juices. For this reason, oat or wheat porridge is a good laxative when cooked only for a short time, while barley porridge is good in cases of diarrhoea. When large quantities of food are taken at once a larger percentage of digestible material is passed undigested. In the case of fats, however, large quantities may be taken without any increased percentage in loss. In considering the nutritive value, vegetable foods are as a rule more bulky than animal foods, hence tend to evacuate a greater amount of undigested residue. This is important in considering the food in cases of intestinal lesions.

In order to facilitate and abbreviate the consideration of the dietetic treatment of each disease, I shall group them into two main classes—acute and chronic; and after consider-

ing briefly the main line to pursue in each, shall pass on to consider some minor points which may be of some small practical value.

In all acute troubles the diet should be strictly limited to a fluid, or semi-solid, diet, which will be almost entirely digested. Foods having a large per cent. of residue are contra-indicated, particularly in enteric troubles. Water is most easily assimilated, and consequently is the best vehicle for conveying foods into the system. It is also invaluable in washing away the nitrogenous debris, which is increased in quantity owing to increased metabolism. In the acute cases, where the fever is high, it is considered well to aim at preventing the increased metabolism of nitrogenous tissues by supplying albuminous foods, which are consumed in their stead. Emaciation is to some extent limited in this way, and the patient's strength is thus reserved.

I will pass over without comment that universal food, milk, which is so valuable in all acute troubles, and will consider a few points regarding farinaceous gruels. In a certain percentage of cases, a milk diet is but poorly borne, and at best soon becomes tiresome. A discriminate use of carefully prepared farinaceous gruel goes far to supply the need in these cases, and probably are of more dietetic value than the great majority of meat broths, which, in nutritive value, are little more than a saline solution, with some gelatine and extractive matters. Stomeyer feeds his typhoid fever patients largely with oaten grits boiled for three hours without sugar. In some forms of enteric fever, with great emaciation, farinaceous gruels are strongly indicated. They must not be given too sweet, and a little cream or lemon juice may be used instead of sugar. It is often advisable to add a tablespoonful of malt extract, or some of the prepared foods, as Mellin's, Ridge's, etc. Some object to these gruels, on the ground that they cause tympany. If this is troublesome, some of the difficulty may be removed by pre-digesting the gruel.

In many cases of fever, alcohol is very valuable as a food. It enters the system and becomes oxidized, and in this way saves the tissues. Its need in the early stages of fevers is not to be compared with its needs in the latter part, and its use in the early stages as a routine practice is much to be discouraged.

Thompson speaks of it in the following terms: "In all

complications which threaten life, such as severe hæmorrhage, sudden cardiac dilatation, hyperpyrexia (107 degrees Fahrenheit), pneumonia, or uncontrollable diarrhoea, alcohol must be given without stint." Alcohol, and in fact all foods, in acute cases need to be ordered and prepared with much discretion, and by close observation and attention to each individual patient, the physician may score many a brilliant success where poor nourishment would have ensured failure.

In chronic diseases the diet differs very largely with each affection. In order to prescribe a dietary for a patient, a careful analysis of the condition present will suggest the requisite elements to remedy it. On comparing the foods having the necessary elements, a selection should be made with some regard to the occupation of the patient. If the patient is an educated person, and has been following a sedentary life, using his mind more than his body, a selection of foods having a large proportion of phosphates is advisable. If the patient is a laboring man, with muscles developed more than nervous matter, foods rich in nitrogenous material will more readily regenerate. If the patient is a young, poorly nourished child, with a nervous, irritable disposition, and a suspicion of rickets, a diet rich in phosphates is indicated.

To the delicate neurasthenic lady, who has never developed her muscular system, and who is not called upon to resist cold, the nitrates and carbonates are not so necessary as to the convalescent school boy who is preparing for his athletic games, to be indulged in regardless of heat or cold.

I dare say that it would be consoling to the school boy to know that his overpowering appetite for all sweets is not a pernicious one, but a lusty call of nature for one of the most available force producers.

In prescribing a course of diet, it is well to give as large a variety as the case will allow. In some chronic cases, such as diabetes and nephritis, the diet is unfortunately so limited that it must inevitably become tiresome. Some small variety can be gained in these cases by varying the form of preparing the food; introducing new flavorings, etc. In private practice it is almost impossible to carry out to a satisfactory termination many of the reputed diet cures for various diseases, such as the various "milk cures," "whey cure," "Koumiss cure," "grape cure," etc. Not a small factor in these cures is the change of climate and other

helpful changes which usually accompany a course of treatment.

It is refreshing to see that in the most advanced training schools for nurses, special attention is given to the culinary department. Nurses are thoroughly trained in the methods of preparing these various foods, and consequently eliminate any chance of serving their patients with food that will aggravate their trouble rather than nourish them. This is a step in the right direction, which I hope will soon be followed by the establishment of a chair of Dietetics in our universities. To-day the student is instructed in the elaborate methods of preparing tinctures and fluid extracts, and all the million and one drugs of which he is unable to remember even the names, and yet his course of instruction as to the value and action of the various foods is meagre in the extreme. He is not asked to write the formula or directions for preparing any special food; he has never prepared these foods himself, and for all the assistance derived from his medical studies he could not even say whether a food was properly prepared for his patient or not.

To the physician an exact knowledge of foods is the key to success in many cases; to the anxious mother, striving to prepare some tasty morsel, each fresh hint from the physician is seized with gratitude, and forms a further bond of union; and, as to the sick, who can measure their joy at the appearance of some fresh article of food to their limited bill of fare?

TWO CASES OF TUBAL PREGNANCY SUCCESSFULLY TREATED BY OPERATION.*

By FRANK R. ENGLAND, M.D.,
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Mr. President and Gentlemen—Ectopic gestation is by no means uncommon; cases are reported frequently in medical journals, and during the past two years a number have been brought before this Society; nevertheless, they are so important that it is our duty to record, at least briefly, every case. The two cases which I bring before you will, I trust, contribute something to aid in the early recognition of this unnatural and grave condition, and if they do I am content,

* Read before Montreal Medico-Chirurgical Society, 1st May, 1896.

for any advance in the treatment must arise, not from new methods, but from recognizing early, certain well known symptoms which are so characteristic of extra-uterine foetation. When one is able, by the clinical history and symptoms, to diagnose, and diagnose early, "tubal pregnancy," say at the fourth or sixth week, the treatment will be satisfactory, even if a rupture of the tube has occurred, and a considerable quantity of blood flowed into the broad ligament, or into the peritoneal cavity. An abdominal section is not a difficult matter, and is a comparatively safe operation nowadays, in competent hands.

Asepsis is of the utmost importance, and must always be secured, if our treatment is to be successful. The peritoneum must be protected against every possible source of infection. Everything which comes in contact with the field of operation must be sterile, for this is our safeguard against inflammation. Peritonitis is invariably due to the action of micro-organisms; we therefore exclude them from the cavity, and expect rapid healing without inflammation and without suppuration. A patient may lose a great deal of blood; be almost pulseless, yet, by the aid of stimulants, heat and the intra-venous injection of normal saline solution, recover, so long as peritonitis can be prevented.

Case 1.—Mrs. W. S., aged 43, married, the mother of two children, the oldest is 13 and the youngest 9 years. Until her first child was born she enjoyed the best of health. Between the births she had a number of miscarriages. The second puerperium was prolonged, and convalescence slow. She suffered after the birth from what was called inflammation of the ovaries and milk-leg. During the past nine years she has led an active life, and her health has been good until about a year ago, when I attended her for a severe attack of measles, followed by thrombosis of the left femoral vein, the same limb which before had been affected. Since the birth of her second child menstruation has been regular every month till December, 1895, in which month she was twice unwell, the flow ceasing the last time on the 25th.

In January, menstruation did not appear, though some abdominal pain was complained of at the end of the month. On the 12th of February she was suddenly seized with severe abdominal pain and weakness; no pallor was noticed nor did fainting occur. The pain lasted about two hours.

The three following days she was able to perform her household duties. On February 15th the pain suddenly returned with increased severity; a physician was called in and an anodyne prescribed. On the 17th February she was up and about, and on the 18th went down town; while shopping the pain returned, compelling her to leave the store and go home. On the 19th February I was sent for late in the evening. Found patient in bed suffering abdominal pain, which had been constant since the previous day, and at times was very severe. The pain—bearing down in character—was during the exacerbations reflected from the lower zone of the abdomen to the rectum. There was much tympanites, and the parietal muscles were tense and rigid; over the right iliac region the tenderness was most marked, and an indistinct tumor could be made out. The uterus was enlarged, tender to the touch, movable, the os patulous and dilated, admitting the finger; posteriorly and to the right an indefinite mass could be felt which was acutely painful on the slightest pressure. Temperature, 99 degrees Fahrenheit; pulse, 98. There had been no chill and no vomiting. The case was discussed with Dr. J. J. Ross, and a diagnosis of intra-peritoneal haemorrhage made, due in all probability to ectopic gestation, with rupture occurring at about the sixth week. Morphia and rest were prescribed for the night.

On the 20th February the patient passed a bad night, the pain and tenderness continuing, and was made more severe by any movement of the body. The face and lips looked paler than on the previous day; abdominal distention persists, and when the body is inclined to either side a dull percussion note is heard over the dependent flank, and extending forward nearly to the umbilicus. When the patient is turned from one side to the other for a change, a minute or two is required in this position for the dullness to occur. Temperature, 98 1-2 degrees Fahrenheit; pulse, 126.

The low temperature, rapid pulse, anxious expression, increasing pallor and great weakness, made immediate operation imperative. The patient was removed to the Western Hospital, and at 5.30 p.m. an abdominal section was performed, Drs. Perrigo and A. L. Smith assisting at the operation. On opening the abdomen (four-inch median incision), dark-colored fluid blood flowed freely from the peritoneal cavity; to prevent further bleeding, the right ovarian artery

was promptly secured with clamp forceps; the appendages were isolated; the pedicles transfixed and tied off in the usual way; the firm coagula which filled the cavity of the pelvis were then broken up and washed out by copious irrigation with normal saline solution (na.cl. grs. 45 to 17 ounces); finally the cavity was mopped out with gauze sponges, leaving it as dry as possible, and the incision closed. Her condition after the operation was extremely bad; ten ounces of normal saline solution was introduced into the median basilic vein, and a hypodermic given of morph. gr. 1-4, atrop. 1-120, also 1-20 strychn. The patient was placed in bed and surrounded with blankets and hot water bottles. She came out of the anaesthetic quietly, but vomited a little several times.

February 21. Patient feeling comfortable, though very pale and weak; pulse, 116 degrees; temperature at 8 p.m., 100 1-5 deg. Fahrenheit; bowels moved slightly, and a good deal of flatus passed; no further vomiting.

February 22. Patient has had a fairly good night, sleeping about three hours in all.

February 23. Patient feeling much better and stronger; bowels moved well; taking milk and soda, tea and biscuits.

From this time on nothing worthy of note occurred; convalescence was rapid, and recovery uninterrupted and complete. The patient left the hospital four weeks after admission.

Case 2.—Mrs. S., 39 years, married, the mother of one child; menstruation began at 16 years; as a girl she was always well and regular; she was married at 20 years; twelve months later her child was born; a midwife was in attendance; her recovery was thought to be satisfactory, and she was up and about in ten days. Five years later she suffered from some uterine trouble, and was in Dr. William Gardner's ward in the Montreal General Hospital for four months. After this treatment she remained well until four years ago, when she again suffered from so-called "inflammation of the womb." Her menstrual function was regular until the 1st of March, when she missed a period. April 1st she complained of abdominal pains, and morning sickness. April 5th the pain became very severe, the face pale and great weakness, but not amounting to fainting. Dr. Springle was sent for; he diagnosed the case as one of tubal pregnancy; absolute rest in bed was prescribed. April 9th an operation

was thought advisable, when she was removed to the Western Hospital and admitted under my care. On the following day a laparotomy was performed. The peritoneal cavity was filled with liquid blood and coagula, both appendages were found diseased, and removed. Pregnancy, with rupture, had occurred in the right tube. The left ovary and tube were firmly glued together and fixed by adhesions in the pelvis. The cavity was thoroughly flushed out with saline solution, and the abdominal wound closed. The patient's condition on leaving the table was good, and her recovery was rapid and uninterrupted. The pulse at any time after the operation did not number more than 80 per minute, and the temperature did not reach a point above 99 degrees Fahrenheit. She was up and about the ward at the end of three weeks. A few days later she returned to her home, feeling as well as ever.

An abdominal bandage was advised to be worn for some time as a precautionary measure against hernia.

Selected Articles.

By J. EDWARD SQUIRE, M.D., M.R.C.P., D.P.H.,
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THE THERAPEUTIC STATUS OF TETANUS ANTITOXIN.

Whenever a new therapeutic effort is made which is based on apparently rational views, it is our duty to encourage it in every way possible, although we should at the same time regard it with judicial doubt until its success is proved. In none of the recent advances is this more the case than in respect to tetanus antitoxin. In the first place, the comparative rarity of the disease in man provides us with clinical studies few and far between; and, in the second place, the statistics as to recovery are imperfect, in that, roughly speaking, in the form of an Irish bull, all cases of tetanus under the old methods of treatment either died or got well. That is to say, the severely infected cases died, do what we could, and the mild or chronic cases, in which death did not ensue in a few days, persistently recovered, in the face of treatment which must in times past have seriously hampered their chances. It is a notorious fact that chronic tetanus is very apt to recover, and until this class of cases is separated from the severe forms in the statistics of antitoxin treatment, we can learn little that is permanent or positive.

Mawson has collected (*Lancet*, August 10, 1895) thirty-eight cases, published and unpublished, upon this subject, and points out the facts we have endeavored to express.

	Recov- eries.	Deaths.
Total number of cases collected, 38, including cases that are only mentioned as having been treated, no further particulars being given....	25	13
Number of cases treated, of which particulars are given, 22.....	17	5
Number of cases treated, of which particulars are given, and which were regarded by their recorders as "severe," 9.....	5	4
Ditto, "not severe," 13.....	12	1

He thinks that the average mortality of tetanus in chronic cases may be regarded as fifty per cent., and in acute or severe cases as ninety per cent., and he has arranged in the four following groups all the recorded cases of treatment of tetanus by immunized serum. Of the thirty-eight cases collected, only twenty-two

were fully reported ; they fall under their respective heads as follows: (1) cases in which the symptoms commenced to abate immediately after injection, and then steadily disappeared, nine ; (2) those which remained *in statu quo* for a short time after injection, and then gradually improved, six ; (3) those in which no further muscles became involved in spasms after commencement of treatment, though occasionally an aggravation of certain other symptoms (as trismus and difficulty in swallowing) occurred, two ; and (4) those ending fatally, notwithstanding treatment, five. Space does not permit of a detailed notice of the cases, but, in spite of the unfavorable result of the case treated in the Staffordshire General Infirmary, he has come to the following conclusion : there is no doubt that the antitoxic serum has a favorable effect in certain cases of tetanus, and those not always of the mildest form. This serum may be justly called a remedy for the disease of such importance that up to the present time no other method of treatment can bear comparison with it. Mawson thinks, therefore, that the antitoxin serum is destined considerably to decrease the mortality in tetanic cases.

Washbourne also calls attention in the *British Medical Journal* to Kantnach's statistic in the *Medical Chronicle*, and from these it would appear that the treatment is useless in acute cases with a short incubation period and rapid onset of spasms, while the chronic cases, with long incubation period and slow onset of spasms, often recover ; but this latter class of cases frequently do well with other methods of treatment. A definite opinion cannot be formed until a much more extensive trial has been given to the remedy. It must be remembered that in tetanus there is no characteristic lesion at the spot of infection, and a diagnosis is only arrived at when the disease is far advanced ; consequently, treatment is commenced at a late stage, and analogy with the experiments conducted upon animals renders the prospect of success not very hopeful.

Further instructive information on this topic is presented by Howlett, who tells us in the *British Medical Journal* that, although it is very difficult to arrive at an accurate idea of the proportion of cases which pass to a fatal issue, he has, by careful comparison of the statistics from various sources, come to the conclusion that the mortality may be stated at somewhere about seventy-five per cent. Now, as to the antitoxin treatment, Howlett, collected statistics of sixty-one cases treated with antitoxin, with twenty-two deaths, giving a mortality of only thirty-six per cent. There are however, several fallacies to be guarded against. There is always a tendency to publish successful cases only. Although it is stated that the Italians have suppressed fatal cases, we do not think that this source of error would materially influence the result, for, being a new treatment, it is probable that the greater number of cases have been published. There are, however, other fallacies, notably : (1) that a favorable result was independent of the antitoxin

treatment; and (2) that a number of chronic cases, which tend to recover under the old treatment, make up the apparent successes. He then goes on to say that the antitoxin issued by Tizzoni differs from the others in that it is obtained by precipitation of the serum by means of alcohol; in the other cases the serum is issued either in the usual liquid form, or is reduced to a solid by being dried *in vacuo* over sulphuric acid. All these antitoxins possess a very high immunizing power; this should never be less than 1 to 1,000,000, and Roux has succeeded in getting it much more powerful still.—*Therapeutic Gazette*.

HEREDITY IN RELATION TO INSANITY AND IDIOCY.

The opinion that a neurotic inheritance is the chief predisposing cause to insanity is now very generally held. Some alienists are disposed to go even further, and declare that it is mainly to the original constitution of the brain that we must look for the first and chief cause of mental breakdown, the ordinarily assigned causes being none of them, in themselves, sufficient to bring on insanity. It can scarcely be called into question that what is called rather indefinitely "the neurotic inheritance" does render the brain more liable to be affected by such proximate causes; and the belief is now general that, whether we can discover the fact of such inheritance by outward and visible sign or not, its existence and evil influence are indisputable. Indeed, the opinion has by a recent writer been rather dogmatically expressed in the statement that "the condition common to all mental disturbance is to be sought in inherited and inherent brain-defect." This is exclusive of the forms known as septic or toxic insanity and those instances of aberration of mind symptomatic of cerebral exhaustion, traumatism, and other pathologic lesions.

In view of the present etiologic importance assumed by this neurotic inheritance, or hereditary predisposition, it would be well to define this condition and determine its definite relationship to insanity and idiocy. The views of a distinguished German alienist are pertinent to this consideration, and may be briefly quoted. In the preface to his work on Psychiatry, Prof. Theodor Meynert expresses dissatisfaction with the statistical method, which, in his opinion, has laid inordinate stress upon hereditary predisposition, and which broadly teaches that predisposition itself is a form of disease and not a condition antecedent to it. Nor is he content to accept what he terms the "mystical conception of heredity," but he insists upon certain anatomic peculiarities in patients which constitute this predisposition. The existence of such peculiarities is to be inferred not only from symptoms and external signs, but also from due consideration of all abnormal proportions of the body. The doctrine of heredity,

according to Meynert, is carried to an extreme in the assumption of the existence of innate ideas, and, in clinical medicine, has led to the erroneous theory of moral insanity. With DuBois Reymond and Weissman, he criticizes Darwin's theory of acquired faculties, and quotes approvingly Weissman's words: "Talents do not depend upon the possession of any special portion of the brain; there is nothing simple about them, but they are combinations of many widely different psychical faculties." At the same time, Meynert fully recognizes the possibility of an abuse of the doctrine of inherited anatomic peculiarities and of hereditary predisposition, even from the standpoint of actual fault of organization as its tangible basis, on account of the constant suspicion of mental defect attaching thereto. But he reminds thinking physicians that they may avoid this danger by distinguishing between the many who are possibly called to disease and that fortunately smaller number of persons who are, in the saddest sense of the term, chosen for disease.

The following conclusions upon this subject have been formulated at our request by Dr. John B. Chapin, a distinguished American authority, now in charge of the Pennsylvania Hospital for the Insane at Philadelphia:

1. Physical characteristics, those distinguishing the human species, for instance, are transmissible by inheritance.
2. Knowledge, genius, culture, being dependent on the influences of education and environment upon the individual, are not transmissible; but what may be termed mental receptivity, and degrees of cerebral evolution and development, may be inherited. Psychic qualities are not necessarily an inheritance, as they require favorable surroundings and circumstances for their growth and development.
3. Insanity, as a disease, is not transmissible by inheritance, but may be acquired or evolved, especially where a neurotic heredity exists as a basis.
4. A neurotic predisposition is transmissible by inheritance; but there is no absolute rule that it will be transmitted in every case.
5. As regards the formation of a neurotic heredity, the in-breeding of neurotic temperaments is most conducive to its creation.
6. Idiocy and imbecility may be the resultant of certain defects having origin in consanguineous marriages; in pre-natal conditions, accidents, arrested cerebral development, infantile meningitis, tuberculosis, and lack of potency on the part of one or both of the parents from unexplained causes.

Premature closure of the sutures in the cranial vault has also been recognized as a cause of imbecility, and for the relief of this condition linear craniectomy has been proposed and performed, without, however, a gratifying amount of success. Indeed, Bourneville asserts that the theory of Lannelongue in regard to

craniotomy in microcephalus has no anatomic and physiologic basis, in fact, and that the operation should be banished from the list of justifiable surgical procedures. It is clear that a distinction is to be made between those microcephalic cases in which there is premature synostosis with arrest of cerebral development, and those in which the head is small because the brain itself is small. Among the unexplained causes of lack of potency on the part of one or both parents, alcohol may be placed, according to very prevalent popular belief. Not only may the mental endowment of the child be unfavorably influenced by acute alcoholism at the time of conception, but also the cerebral changes and nerve degeneration, and inflammation, resulting from chronic alcoholism, are distinctly prejudicial from the standpoint of heredity.

To broach the topics of degeneration and atavism would take us beyond the limits of the present article, although they are closely related to the subject of the relation of heredity to insanity and idiocy. But to sum up the foregoing, it is evident that Meynert recognizes an anatomic peculiarity, which may or may not manifest itself by symptoms of aberration. Chapin holds that neurotic instability may be transmitted by inheritance, yet it is capable of exerting only a potential influence in the later development of mental disorder, which may be evoked by social condition, environment, or pathologic changes in the cerebral cortex. Imbecility and idiocy, however, may directly result from defective cerebral development or pre-natal disease.

The whole subject of the etiology of insanity is a complex and difficult one, and, as pointed out by Holland some fifty years ago in his "Medical Notes and Reflections," it is rendered more abstruse by the fact that the pathologic change may be so minute as to defy the search of the pathologist, although sufficient to produce disturbance of intellection, while, on the other hand, great organic changes in the brain are not incompatible with the occurrence of a lucid interval, which, if we are not on our guard, may lead us to entertain false hopes of recovery.—*The Journal*.

CHRONIC DYSPEPSIA IN CHILDREN.

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In *American Journal of the Medical Sciences*, December, 1895.)

Everyone recognizes dyspepsia in adults in its protean and omnipresent forms, every medical man knows its importance in infancy in association with errors of diet; but between these two periods of life is one in which its frequency and the varied symptoms it produces are perhaps less commonly realized, although possibly it is hardly less prevalent than in adult life, and scarcely less important than in infancy. Childhood—especially boyhood—

is a period when the digestive and assimilative powers are supposed to be at their maximum, when the capacity for taking food—and even that which can hardly be termed food—with impunity seems to be almost unlimited, or when at most a sharp but transient attack of gastritis or gastro-enteritis, with pain, diarrhoea, and vomiting, seems to be the only penalty for even the most apparently outrageous violations of the ordinary laws of digestion. True, during the stage of rapid growth and development, the ingestion of a large quantity of nourishment is essential, and digestion and assimilation must needs go hand in hand with appetite, but because the functional activity of the alimentary canal is great, it does not follow that its work must always be properly performed in face of all difficulties; nay, rather, the more active the digestive mechanism, the more readily are those activities deranged, just as a rapidly moving body will be turned by an obstacle further from its course than a slowly moving one; or just as a complicated machine, capable of a great output of work, may be more easily and seriously damaged by a slight injury than a less efficient but simpler instrument.

We need, moreover, to recollect that digestive disturbances must necessarily be more important in their consequences during childhood—the period of development—than in adult life, for in the latter case adequate repair is alone interfered with; in the former, not repair only, but also growth. In fact, the activity of the process in early life is a measure of the harm likely to result from any interference with it. In adults, dyspepsia is a frequent result of overfeeding, and may be a natural protection from more serious consequences; how many pay in gout the penalty for too good a digestion? In children, on the other hand, excessive feeding is rarely a cause of much harm, the punishment, instead of being deferred, comes at once, and an acute attack of vomiting is the usual penalty for and cure of a surfeit; improper food is more likely to be the cause of chronic digestive trouble, and there is no compensation for the resultant mischief, no protection from other evils.

Another point to bear in mind, especially in treatment, is that—in accordance with the general rule that all abnormal conditions in childhood are less localized than in adults—the intestines are generally affected along with and in the same way as the stomach, so that, though we speak as a rule of chronic gastric catarrh, it would be more correct to term it chronic gastro-enteritis.

Etiology.—In considering the causation of dyspepsia, we need, of course, to remember that there is usually more than one factor present, but I think that not in childhood only, but also in infancy and adult life, we do not lay sufficient stress upon the influence of heredity as a very frequent predisposing cause. Even some babies will thrive upon what appears an eminently unsuitable diet, whilst others, as well or even more favorably circumstanced in other respects, fail to digest even the most carefully selected and pre-

pared food ; the same differences exist in childhood, differences only explicable by hereditary or congenital defects, and hence some children always require infinitely more care than others in regard to their food.

A second great cause of dyspepsia, one which is, if possible even more potent than in adult life, is town life and indoor life because children even more readily than their seniors suffer from unhygienic surroundings. In this connection it seems probable that universal compulsory education, by keeping children together indoors from a very early age, during the lightest hours of the day, and often in badly-ventilated buildings, must largely increase the prevalence of digestive disturbance. Much of the dyspepsia arising from these causes is, of course, a part merely of general debility and anæmia, all the organs perform their functions badly, and those of digestion are naturally as much, if not more, affected than others.

The third cause, and certainly the great exciting one, is improper feeding—irregular meals, odd things between meals, tea, sweets, pastry, cakes, etc., and an excess of carbohydrates, particularly of potatoes, all tend to produce and maintain digestive disturbance.

Besides these three great factors there are several other important though less frequent causes of dyspepsia ; it is a common sequel of the acute specifics, especially of measles, that diseases of the respiratory mucous membrane follow measles is well known, but its after-effects on the gastro-intestinal tract, though probably more frequent and hardly less important, are not, I think, sufficiently recognized. Nothing is more common than for the convalescence in this disease to be retarded or incomplete owing to gastro-intestinal catarrh, which may be very persistent.

(Throughout childhood, in fact, the respiratory and gastro-intestinal mucous membrane are much more closely connected pathologically than in later life ; in the acute bronchitis of adults the tongue is usually furred out of all proportion to the amount of fever, but in children this conjunction is much more marked, and hence in early life diarrhœa is a frequent attendant upon bronchitis and broncho-pneumonia.)

Chills, from the clothing being insufficient, or, as is more frequent, improperly distributed, are an important cause of dyspepsia in childhood, though less so probably than in infancy.

The condition of the teeth as another possible factor is even more often overlooked in children than in adults, but the possibility of painful decayed teeth preventing the proper mastication of the food should not be forgotten ; and in this connection may be mentioned also the inveterate habit which some children have of bolting their food.

So frequent is dyspepsia from one or other of these causes that, in the ordinary routine of hospital out-patient work among children of say from two to ten years of age, a very large proportion—if not the majority—of the cases are brought for digestive disturbances or their consequences.

SYMPTOMS.—The symptoms of dyspepsia in childhood are both local or direct, and reflex or indirect, and differ widely from those met with in adults. We will take the direct symptoms first: the appetite is capricious and irregular, there being often a craving for unsuitable articles of diet, with distaste for more wholesome but plainer food; hence follows one of the most important symptoms, viz., wasting; simple dyspepsia in adults is rarely associated with much wasting; in children it is necessarily different, for the anorexia at a period of rapid growth must necessarily markedly affect nutrition; at the same time the child is usually pale, irritable and listless, taking little or no interest either in its play or its work.

The tongue is commonly furred with prominent papillæ, and often presents the curious irregular patchy distribution of furred and overclean areas, sometimes termed the mapped or geographical tongue. The bowels are generally costive, but may be irregular, especially in younger children, constipation and diarrhœa tending to alternate. The abdomen is usually distended, and this is the more noticeable owing to the natural prominence of the belly in children from the small pelvic development. Pain, referable either to the stomach or bowels, may be complained of, but is seldom severe in chronic cases.

But besides the direct symptoms, there are others which illustrate very markedly the reflex consequences, which in children so readily result from irritation of any organ, and especially of the stomach, and which, unless rightly interpreted, may be a cause of much trouble in diagnosis and treatment. Headache particularly in the morning, is a very usual symptom, also grinding of the teeth; night terrors may occur in neurotic, excitable children, and may be wrongly and ineffectually treated unless their true cause be understood. Syncopal attacks may undoubtedly be due to dyspeptic conditions, although the possibility of *petit mal* must not be overlooked. A dry, hacking cough is by no means rare, and its significance is frequently misinterpreted. Henoch has pointed out that serious asthmatic symptoms—with cyanosis and rapid breathing—may be due entirely to irritation of the nerves of the stomach in gastric catarrh. Of course more acute gastrointestinal attacks, with severe pain, vomiting and diarrhœa, and often exaggerated reflex symptoms, are particularly apt to supervene in children who already suffer from chronic gastro-enteritis.

DIAGNOSIS.—At times this is clear enough, the local symptoms—loss of appetite, furred tongue, and constipation, with markedly unsuitable diet and defective hygienic surroundings—sufficiently indicate both the disease and its cure, but in many instances there are few conditions which give rise to greater difficulty in diagnosis than that of chronic dyspepsia. The child is brought, perhaps, with a history of wasting and persistent cough; the parents naturally suspect consumption; a physical examination yields somewhat equivocal results, owing to the distinct

bronchial breathing heard in a child in the upper interscapular region, over the large bronchi, and especially on the right side. Even if we exclude pulmonary tuberculosis, we naturally think of the possibility of that well-nigh undiagnosable condition, early caseation of the bronchial or the mesenteric glands, and the difficulty is increased by finding, as we often do, that the evening temperature is generally somewhat above normal, whilst the nervous symptoms may excite a suspicion of commencing tubercular meningitis. In many such cases only time and the results of a carefully regulated dietary will clear up the diagnosis, but oft-times, unfortunately, under the mistaken apprehension of incipient tuberculosis, the child is dosed by the parents, and frequently by the medical man, with cod-liver oil, "chemical food," syrups, etc., as well as with a supposed nourishing diet—a line of treatment which only aggravates in the highest degree the real malady.

Next, perhaps, to consumption the most frequent parental diagnosis is that of worms, and, indeed, they are often present, especially thread worms, but to regard them as a cause of the symptoms is a reversal of the true state of affairs; we need more and more to try and impress upon the public mind that intestinal worms (excluding perhaps tape-worms) exist in the alimentary canal because it is in an unhealthy condition—in a state usually of chronic catarrh—and that the symptoms which they are supposed to produce are, as a rule, not due to worms at all, but to the catarrhal state of the bowel which permits their existence. Worms are, in fact, to a large extent a symptom rather than a disease, and we shall best get permanently rid of them by treating the abnormal condition of the intestines.

On the other hand, we have to beware of the danger of mistaking for mere dyspepsia, especially in children who are known to be subject to it, the early stages of tubercular diseases or of typhoid fever, a slight but persistent tonsillitis, of which the child may make no complaint, or a chronic rheumatic condition with very little joint trouble, a by no means rare occurrence in early life.

TREATMENT.—The first and most important step is, of course, to recognize the true cause of the varied symptoms for which the child may be brought; it is so easy to get into the habit of treating worms, night-terrors, cough, constipation, etc., purely symptomatically; but the most frequent and serious error is to regard the case as one simply of anæmia and debility, or else of threatened tuberculosis, to be treated by tonics—cod-liver oil; "chemical food," iron, etc.—and by feeding up, both with unsuitable food and at too frequent intervals, with the result of increasing and perpetuating the already existing digestive disturbance. Even in cases in which tonics will eventually be needed, they must not be given until the alimentary canal is in a fairly healthy condition, or they will do more harm than good.

In the great majority of cases the first point to which to attend is careful regulation of the diet; the food should be given at regular intervals, and nothing between meals, tea should be forbidden, and all cakes, buns, biscuits, sweets, jams, pastry, etc., these being the more pernicious because often given at odd times to tempt, as is supposed, a poor appetite. Potatoes should be allowed in very small quantity only. On the other hand, we may recommend an ordinary meal of fresh meat once a day, about noon, with green vegetables and a milk-pudding after. For the other meals, fresh fish, porridge, bread and butter, eggs, fruit, and milk in abundance, but as a food, not a beverage. There are, of course, some children, just as there are some adults, who have idiosyncrasies in not being able to digest some special article of diet; but these peculiarities obviously cannot be considered in a general statement—each case must be dealt with on its merits. The parents will often say that children will not take the plain, wholesome diet recommended, and can only be got to eat fancy things, sweets, etc. Owing to long-continued pampering and improper feeding this may be true, but no child will starve itself to death because it cannot get just what it wants, and when it finds its whims ungratified, in default of anything else, it will soon learn to partake of a suitable dietary.

Having regulated the food, the next important matter is to insure a full and regular daily action of the bowels; even though they are said to act every day, a mild aperient is usually desirable, in order to prevent any undue retention whatever of intestinal contents, or any accumulation of mucus, which is often produced abundantly in catarrhal conditions of the bowels in childhood. If there has been constipation and the tongue is much furred, one or two grains of calomel will be useful at first, otherwise rhubarb and soda, or gray powder and soda, should be given every other night. If either round or thread worms be present, a few grains of santonin may be added to either of the above powders, and given before breakfast for three or four mornings. When convalescence is well-nigh established, half a teaspoonful or so of the compound liquorice powder forms perhaps the most suitable and agreeable habitual laxative.

Thirdly, the child should be out in the open air as much as possible. There is great danger that when, as so often happens, these dyspeptic children suffer from cough they may be kept indoors either altogether, or at least on the slightest approach of cold or damp weather; nothing could be more injurious, and the reason why in large cities the poorest class of children, for whom the street is the habitual play-ground, are often more healthy than those of a slightly higher social scale, is probably the far greater amount of at least approximately fresh air which the former get. In many cases of town-bred children, in whom the dyspepsia is a part mainly of general debility and anæmia, a change to seaside or country air is the most rapid if not the only cure.

The suitability of the clothing must, of course, be seen to ; its quantity is not, as a rule, at fault, but rather its distribution. In this respect old traditions as to hardening the skins of children die slowly, and the chest is not uncommonly enveloped in four or five layers of flannel, whilst the arms, legs and thighs are left almost entirely bare.

Last, and in many respects least, we come to drugs : A combination of bicarbonate of soda (7 grains), tincture of rhubarb (20 minims), tincture of nux vomica and spirit of chloroform (4 minims of each), may be given to a child of five years three times a day, about half an hour before meals, and if anæmia be very marked 2 grains of citrate of iron and ammonia may be added. After food, if the tongue be not much furred, one or two teaspoonfuls of maltine may be given twice a day. In the later stages, when the dyspeptic symptoms are much improved, a mixture of liquor strychninæ (2 minims), with two or three teaspoonfuls of vinum ferri citratis, is useful. Cod-liver oil is best avoided, except in the winter months and when convalescence is quite established ; probably all "chemical foods" and tonic syrups are injurious, owing to the sugar they contain causing fermentation and flatulence. If the nervous symptoms, such as night-terrors, are prominent, some bromide of potassium may be given with the other drugs mentioned ; but such symptoms should never be treated by nerve sedatives only.

Finally, as an additional incentive to the prompt and active treatment of these cases of chronic dyspepsia, we should remember that if long continued, it must lead to enlargement of the Peyer's patches and mesenteric glands, a condition which facilitates in the highest degree the lodgment of any tubercle bacilli which may be taken in the food, a lodgment which is still further promoted by the lowered general vitality in these cases ; thus chronic gastro-enteritis becomes an important predisposing cause—first of abdominal, and eventually, perhaps, of general tuberculosis.

Progress of Medical Science.

MEDICINE AND NEUROLOGY

IN CHARGE OF

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LEUCOMAININE POISONING.

B. K. Rachford, M.D., of Cincinnati, Ohio, in "The Medical News," May 16, 1896, communicates an article on this subject. In a paper read by him a year ago before the Association of American Physicians, Washington, he presented evidence to show that leucomaine poisoning was an important phase of auto-intoxication, which may manifest itself as (1) 'leucomaine headache' (true migraine); (2) leucomaine epilepsy (migrainous epilepsy); (3) leucomaine gastro-neurosis. The present paper describes another type, leucomaine asthma. The attacks are similar to the ordinary bronchial asthma, and come on in the early morning hours. The urine contains an excess of paraxanthin and other leucomaines of the uric acid type which are produced in excess. The condition, however, in all the types being produced by paraxanthin rather than by xanthin or heteroxanthin. He thinks that the convulsion seizures of chronic alcoholism, and the delirium tremens symptoms, are due to a similar cause, and also the paroxysmal headaches, the epileptoid convulsions, the gastro-intestinal attacks and the dyspnoea, which so much resemble the symptoms observed in marked gout. He quotes Naunyn as saying that lead like alcohol produces these effects, not as a direct poison, but indirectly, in consequence of abnormal nutrition of the whole system brought about by the continued circulation of a foreign poisonous material in the blood. Cases are given illustrating this perverted metabolism where paraxanthin was demonstrated in one quart of urine; according to Salomon, it can only be demonstrated in nine litres of normal urine; its presence is demonstrated by chemical tests, and the production of paraxanthin poisoning in a mouse, in which a clonic convulsion later becoming tetanic, is a marked feature. In the examination of a number of urines, he found, in regard to xanthin and paraxanthin, that when either was abundant, the other was to the same extent absent. In the closing note of his paper he produces evidence pointing to the fact that paraxanthin poisoning has something to do with the symptoms observed in uraemia.

THE CONSIDERATION OF UREA IN THE URINE.

This is the title of a paper by Dr. James Dudley, Morgan, Washington, in the "Virginia Medical Semi-Monthly," April, 1896. He animadverts upon the disproportion observed by him between the active symptoms and the marked diminution of urea in the urine in certain diseases. Cases are reported of fifteen grains of urea in twenty-four hours, with no symptoms of retention. He believes with Schultze and others, that the excretion of uric acid is a fairly constant quantity, while urea has a wide range of variation, contrary to Haag, who considers that a constant proportion is maintained of 1 to 33 of urea. The other constituents of normal urine, such as allantoin, creatinine, and the uric acid leucomaines, are usually diminished in the same proportion. Some of these latter are poisonous, such as paraxanthin, xanthin and gerontin; and xanthin creatinine, uric acid paraxanthin and xanthin have been found in increased quantities after attacks of migraine and epilepsy. Uric acid and other xanthin bases are also secreted from the intestinal mucous membrane. Variation in the quantity of urea secreted constitutes an expression of the changes in nitrogenous metabolism, which may depend on the amount of food taken, or on certain diseases. Urea is claimed by some to be non-toxic, and a diuretic, hence its deficiency means diminished excretion of the poisonous constituents of urine. Urea and uric acid are formed chiefly in the liver, but the poisonous constituents are the bile salts.

GENERAL TREATMENT OF ANÆMIAS.

There is no disease in which therapeutics may become more perfunctory or routine than in the different forms of anaemia. All varieties except pernicious anaemias are apt to improve under iron, in whatever form it is given, and the variation in the methods of treatment in common use is chiefly between the different preparations of iron, especially between the organic and inorganic. Many obstinate cases would probably yield much sooner if a clearer understanding of the causes of anaemia were attained.

Three conditions are present in the majority of anaemias: first, gastro-intestinal disturbance, with imperfect digestion, assimilation and excretion of food, producing some form of ptomaine-poisoning, or intoxication; which causes marked changes in the blood; second, failure in the action of the liver, which is the most important agent in checking the activity of the poisonous elements absorbed from the intestinal canal, and in preventing these elements from entering the general circulation; third, the uric-acid diathesis, which is closely associated with most marked gastro-intestinal troubles, and produces more or less decided blood altera-

tions. These three agents are intimately connected with nearly all cases of anaemia, and due attention should in every case be shown to their influence upon the symptoms.

If any of the occasional causes of anaemia be present, such as gastric ulcer, hemorrhages of any kind, or poisoning by malaria, syphilis, tuberculosis, lead, or uraemia, no headway will be made in curing the patient until these are first properly treated by appropriate drugs.

To produce the most satisfactory results in treating anaemia it is necessary to follow closely the mechanism of blood-reproduction after any of the diseases affecting the red blood-cells. This takes place largely through the agency of the red bone-marrow. As the only drug which acts directly on the metabolism of bone and marrow is phosphorus, it would seem a very important addition to our means of treating anaemia from any cause.

It should be given in a pill containing phosphorous, or in the palatable elixir phosphori N. F. (1-64 grn. in each fl. drm). If hypophosphites are used, Ringer says that they should never be combined in the same prescription with cod-liver oil or alcohol.

To hasten the production of new red blood-cells, a preparation of bone-marrow has been proved to be valuable, either in the form of raw freshly extracted marrow from the bones of young lambs or calves, spread on bread or in the more permanent form of a glycerin extract. W. G. Thompson, however, regards marrow as merely an assimilable form of fat, and rather doubts the specific action on human bone-marrow and red blood-cells. There is only about 1-56 grn. of iron to an ounce of marrow, so that its favorable action is not due to the iron contained in it; but such excellent results have been obtained by it that, whether regarded as a food or a drug, it should be faithfully used.

In the diet, milk should be given in large amounts, frequently repeated during the day, for the amount of fluid in the circulation is frequently far too small and the capacity of the heart and vessels correspondingly reduced.

If milk is not well borne, a mixture of cream and hot water, with a little bicarbonate of soda and brandy in each glass, is the best substitute. Free use of cream and butter may take the place of cod-liver oil in supplying the fat which is needed in most cases.

The extent to which carbohydrates are to be used in the diet depends upon whether the patient is too lean or too fat.

Albumin in all cases must be increased. Rare meat two or three times a day is advisable (2-3 oz. per diem, according to Van Noorden). A careful variation in diet to suit the condition of the digestive organs and general nutrition is advisable.

There is no disease in which general massage is followed by such satisfactory results as in anaemia. Massage should

be applied to the muscles of the trunk and extremities, but more especially to the abdomen, giving particular attention to this part of the body to increase the physiological activity of the gastro-intestinal tract, the spleen and the liver. Massage properly administered will frequently cure cases of chlorosis without the use of any drugs.

Those forms of hydro-therapeutics in which bathing is followed by a prompt reaction and general stimulation of the entire system are valuable, but constant daily cold sponging or bathing must be used with great caution, lest they gradually lower the tone of the system by minute degrees. Not only cold bathing, but cold weather also, will do this. Murri and Rosenbach have made a careful study of certain types of anaemia limited to cold weather and disappearing in the summer. Either a warmer climate or some treatment that will fortify the system against cold is necessary in such cases.

Rest in bed will serve to cure many forms of anaemia without the use of drugs, and should always be insisted upon as far as possible; even the milder cases will be helped by resting in the mornings and evenings. If these general hygienic and dietetic methods, with the careful use of iron in any form that can easily be tolerated by the patient, assisted by measures affecting the gastro-intestinal system, liver, and bone-marrow, fail to affect the anaemia, the substitution of arsenic with strychnine will frequently be followed by a cure.

In many cases arsenic acts directly by its anti-malarial influence, especially in those forms of anaemia accompanying old malarial cachexias, where quinine has little effect. H. C. Wood states that the drug acts on many forms of anaemia in an indirect manner, by removing the morbid agent of the disease, and allowing the recuperative powers of the system to assert themselves. In other cases its action is due to the usual effect of arsenic upon general nutrition. Even in pernicious anaemia there is frequently observed a temporary improvement of the patient, which is coincident with an increased output of red blood-corpuscles. In many cases this temporary gain may be made permanent by following the arsenic with another course of iron, with the idea that the arsenic has removed the cause that previously made the iron ineffective. But the attempt to cure anaemia of any kind by the use of iron alone, without any of the other forms of treatment, hygienic or dietetic, is unscientific.—*American Medico-Surgical Bulletin*, May 9, 1896.

THE LEUCOCYTES IN TUBERCULOSIS.

Stein and Erbmann (*Deutsches Archiv für klin. Med.*, Bd. 56, p. 323, the "American Journal of the Medical Sciences," April, 1896) contribute a timely article on this subject. They have avoided the more serious causes of

error in previous work in the same line by using a larger number of cases—sixty in all, by making very numerous blood-counts, and by counting more leucocytes than is usually done. In many cases the clinical diagnosis was confirmed by post-mortem examination. In counting the white corpuscles a modification of the method of Thoma was used, in which, instead of counting the corpuscles in the squares of the blood-counter, all those in a number of fields were counted, after estimating the contents of the space covered by the field. For many interesting details the original should be consulted; the following conclusions give the most important results: In beginning phthisis the number of leucocytes is normal. In advanced cases, but where cavity-formation has not taken place, the number is also normal. After attacks of haemoptysis there is usually moderate leucocytosis, which disappears after the cessation of the hemorrhage. In advanced tuberculosis with chronic infiltration, but where destruction of tissue is slight, or has not yet begun, the leucocytes may be normal. Increase of leucocytes is encountered in cases with cavity-formation; in cases with chronic suppuration as the result of carious processes; in final exudative processes; and in cases with hyperplasia of lymph-glands. As regards cavity formation, the following statements are important: If leucocytosis occurs in a tuberculosis case in which there is no chronic suppuration and no exudation, ulcerative change, i.e., cavity-formation, may be diagnosed. If in a case with normal leucocytes for a long time an increase takes place, excavation may be concluded. As long as the leucocytes are not increased the existence of a cavity, at least one of considerable size, may be excluded. The cause of the leucocytosis is not the tuberculous poison itself, but a secondary infection, a septic process, which may be the result of various bacteria.

THE RELATION BETWEEN THE ACIDITY OF THE GASTRIC JUICE AND THE ACIDITY OF THE URINE.

Mathieu and Treheux, after reviewing the work of others on this subject, give the following conclusions as the result of their own observations:

1. There is a relation between the acidity of the gastric juice and the acidity of the urine.

2. The more acid is produced in the stomach, either from normal secretion or food-fermentation, but especially from the fermentation of milk, the more the excretion of acid by the urine, during digestion, is increased.

3. Under normal conditions the acidity of the urine diminishes considerably during the three to five hours following digestion, and later increases again. This diminution

in acidity may be preceded by a passing increase during the first hour of digestion, as if a certain amount of acid was immediately passed on with the ingested fluids and rapidly excreted.

4. As a rule, there is an almost absolute parallelism between the curves which represent the relative acidity (acidity per 1000) and the absolute quantity of acid excreted. This parallelism is wanting when a certain degree of polyuria exists after a meal; the curve of the relative acidity is then elevated, whilst that of the absolute acidity is depressed.

5. When a notable quantity of acid secretion is removed from the stomach, either by vomiting or lavage, this removal is followed by a notable diminution in the acidity of the urine. The urine may become alkaline under these conditions.

6. The average quantity of acid eliminated hourly by the urine is higher in those with increased acidity of the stomach-juice than in those with diminished acidity.

7. The ingestion of milk notably increases the quantity of acid excreted by the urine; this is due, without doubt, to the fact that milk rapidly gives rise in the stomach to the formation of a notable quantity of lactic acid, and that this acid is rapidly carried to the kidneys on account of the increased diuresis.

8. It is not yet possible to trace the curves of urinary acidity during digestion in such a manner as to be able to diagnose the chemical variety of dyspepsia present. It seems very probable that such curves cannot be traced.

9. It is necessary to exclude milk from test-meals given prior to the study of these curves. The test-meals must be identical in all cases.

10. The cases studied must be submitted to a constant regime during a sufficiently long time, as we have seen beer consumed the day previous sensibly elevate the proportion of acid found.—*Archives Générales de Médecine*, November 1895.—“*American Journal of the Medical Sciences*, April 1896.

ACUTE LEUKÆMIA.

An important contribution to the study of leukaemia is made by A. Fraenkel (*Deutsches med. Wochenschrift*, 1895, Nos. 39-43, and 45, “*American Journal of the Medical Sciences*,” May, 1896). He had the unusual experience of seeing ten cases of this disease within a short time. Six of the patients were males; four females. Four were between 13 and 18 years of age, six between 24 and 34 years of age. The duration of the disease varied from twenty days to sixteen weeks. Even in the cases of comparatively long duration the onset was sudden and similar to that in the more rapid ones. Hemorrhagic diathesis was an early feature. In eight cases in which examinations of the blood were

made a striking similarity was found, the condition being quite different from that in chronic leukaemia. The leukaemic character of the blood was found to be due to a great increase of mononuclear cells of various sizes, but having the structure and the staining peculiarities of lymphocytes. The larger of these have large nuclei, almost filling the body, sometimes irregular in shape, or in various stages of division. They do not stain deeply. Eosinophile and neutrophile myelocytes were not present, but basophile granulations occurred. The number of polynuclear cells was extremely small. In three cases mitoses were found, but not in all parts of the capillary system, so that Fraenkel believes that this process may occur in certain parts in which the conditions are favorable, perhaps on account of slowing of the current, as suggested by Troje. Nucleated red corpuscles were usually rare. Preparations from various organs show that the mononuclear cells are formed especially, but not exclusively, in the lymph glands. There is lymphæmia in the wide sense; the young forms of cells do not pass on into the more mature forms. The proliferation of the lymphocytes must take place with great activity, and they must soon enter the circulation, hence the clinical picture.

From the similarity of the symptoms and the condition of the blood a single etiological factor would seem probable in all the cases. The course seems to point to an infection. In two cases the absence of bacteria in the blood was demonstrated. The possibility of infection from the alimentary canal must be remembered, however, and Fraenkel shows that the early and constant implication of the cervical lymphatics suggests an invasion from the mouth or pharynx.

In two of the cases an intercurrent bacterial infection was followed by rapid decrease of the number of leucocytes, without an increase of polynuclear forms. This has also been observed by others, and Fraenkel alludes to the possibility of using such observations in devising treatment.

ARE NERVOUS DISEASES INCREASING?

The rational and encouraging view in which Dr. Philip C. Knapp, of Boston, in the current number of the "Century," treats the question, "Are Nervous Diseases Increasing?" goes far toward mitigating the offense of presenting medical subjects in popular magazines. In this article it is asserted with all the authority that can be drawn from as yet incomplete statistics, that the increase in the relative number of insane among the more highly civilized nations is more apparent than real. This is owing to a number of reasons, the chief of which are the change of view entertained toward insanity and its treatment by society, who now look upon it as a disease and not a disgrace; and the present facilities for its better and more frequent detection.

Dr. Knapp also shows that, although Americans are more restless—or rather more active—than other nations, they are not more prone to nervous maladies. The so-called American disease, neurasthenia, constituted only 10 or 11 per cent. of all nervous cases presented at the clinics of several American charities, whereas in Paris 12 per cent. are so classified. Moreover, a large number of the cases treated in America are among our imported population. In the matter of hysteria, its percentage in Europe is several times greater than obtains in America. The relation of nervous disorders to, and their dependence upon, other physical defects, either inherited or accidentally acquired, is duly emphasized, after which it is proven that, as a race, we compare favorably in almost every particular with any other, and are hence not more liable to nervous disease, a fact which is borne out by the mortality tables of life insurance companies, as well as other sources of reliable information. The increasing vigor and self-reliance of our women has raised much of the semi-affected nervous vagaries of the past and replaced them by an admirable power of resistance and self-control. With a better understanding of their causes and a daily improvement in scientific methods for their prevention and control, it is concluded that nervous diseases are not increasing, but on the contrary, the natural inference may be drawn that they should be expected to diminish.—*Medical News*, May, 1896.

ANTIPHTHISIN.

The remedy prepared by Dr. Klebs is not an antitoxin. It is a derivation of Koch's tuberculin, the germicidal constituents of which it is supposed to possess, separated from the toxic ones. According to Kleb's most recent analysis, tuberculin contains (1) tox-albumins, precipitated by sodic iodide of bismuth; (2) alkaloids; (3) an albuminoid derived from the bodies of the dead bacilli; (4) a soz-albumin, precipitated by absolute alcohol after the removal of the toxic ingredients. It is claimed by Klebs that an aqueous solution of this soz-albumin, prepared by him, and named antiphthisin, possesses the germicidal and curative properties of tuberculin without any of its toxic effects. With this product he claims to have caused the complete cure of tuberculosis in guinea pigs, and to have obtained 90 per cent. of good results (whatever that may mean) for all stages of phthisis in the human subject. He states, however, that it will produce its fullest benefits in the very early stages of the disease, for which stages alone it is recommended as a specific remedy; and that in advanced and complicated cases the prospects for its successful use are less certain. Dr. von Ruck, who is associated with Professor Klebs, reports as his experience of nearly one hundred cases of phthisis

treated with this remedy, that it has unmistakable influence over the fever, that under its use percussion dullness becomes perceptibly less, bronchial and harsh breathing give place to puerile and then vesicular respiration, the lung capacity increases, the cough diminishes, the sputum loses its purulent character and lessens in quantity, while the bacilli therein diminish in number and show marked signs of degeneration. Dr. C. Denison, of Denver, reports that most of the cases treated by him with antiphthisin gave evidence of its germicidal and healing effects, "in the lessening of the number of germs to the field found, and their degenerative or incomplete forms thrown off when good-sized doses were reached, as well as in the clearing up of consolidated or infiltrated tubercular lung tissue." Antiphthisin is prepared by Professor Klebs at the laboratory of the Winyah Sanitarium, Asheville, North Carolina, where he is now located. —*Pacific Medical Journal*, April, 1896.

OBSTETRICS.

IN CHARGE OF

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WARNINGS TO BE GIVEN TO MOTHERS.

J. M. Mabbott, in "Medical Record," April 4, says the following warnings should be given to mothers: Warn them not to neglect any hemorrhage during pregnancy; warn women during confinement to keep the hands away from the vulva and vagina; warn nursing mothers never to fall asleep with the infant at the breast.

TREATMENT OF PUERPERAL SEPTICÆMIA BY ANTI-STREPTOCOCCIC SERUM

C. Vinay, in the "Lyon Medical," January 26, considers that puerperal septicaemia may be successfully treated by serum therapy. He used the serum of a horse immunized against diphtheria in four cases. His conclusions are that the serum may be all powerful against recent infection of the blood, as seen in two of the cases, but it is inefficacious against once established organic lesions, as shown by the other two cases. He also states that the local treatment of the infected mucous membranes must not be neglected, especially at the beginning. The best method of employing this treatment would be to always make a culture from the cervix, and to use the serum only in cases shown to be dependent on streptococci. This, however, means loss of

time; therefore, if we have chills, and a rise of temperature to 40 degrees C., we may assume the presence of streptococci. The best time to give the injections is in the evening.

PUERPERAL SELF-INFECTION.

Dr. Chas. Jewett, after an exhaustive study of the question, concludes as follows:

1. There is no clinical proof that puerperal infection can occur from normal vaginal secretions.

2. All child-bed infection in women previously healthy is by contact.

3. Prophylactic vaginal disinfection as a routine measure is unnecessary, and even in skilled hands is probably injurious.

4. Its general adoption in private practice could scarcely fail to be mischievous.

5. In healthy puerpurae, delivered aseptically, post-partum douching is contra-indicated.

6. A purulent vaginal secretion exposes the woman to puerperal infection.

7. In the presence of such discharges at the beginning of labor, the vagina should be rendered as nearly sterile as possible.

8. In case of highly infectious secretions, the preliminary disinfection should be followed by douching, at intervals of two or three hours during labor.

9. The safest and most efficient means for correcting vicious secretions is a mild antiseptic douche repeated once or more daily for several days during the last week of pregnancy.

10. It is the duty of the obstetrician to know before labor the amount and character of the vaginal discharge.

PUERPERAL SEPSIS.

Is hysterectomy for puerperal infection justifiable?

R. R. Kime, "Journal American Medical Association," April 4: Puerperal infection is of two general varieties, viz.: 1. Putrid infection, or sapremia. 2. Septic infection, or septicaemia. The first is a local infection due to decomposition of the uterine contents by putrefactive bacteria only, without migration of the bacilli, not contagious, non-progressive by invasion, due to absorption of ptomaines, not inoculable. In sapremia remove the putrid material from the uterine cavity, irrigate, disinfect, drain, and ninety-nine per cent. of the cases will recover. Hysterectomy would relieve these cases, but it would be criminal to sacrifice the generative organs when such cases can be treated more successfully and with fewer deaths by less heroic measures. The second class is due to germ development, their rapid migration and invasion of new tissue, even entering the general circulation;

if at first local, it soon becomes constitutional, highly infectious, and inoculable from case to case. The septic germs soon extend beyond the endometrium, invading its muscular structures, the lymphatics, the blood vessels, etc., and cannot be removed by ordinary surgical measures, and it is very doubtful if hysterectomy could completely remove the infected tissues in severe cases. If any foreign substance is in the uterus, remove it with the forceps, wounding the endometrium as little as possible; irrigate the uterine cavity thoroughly with an antiseptic solution, and introduce a drainage tube of as large a size as the uterus will admit. Repeat irrigations and cleansing of the drainage tube at least once or twice in twenty-four hours. Give salines and calomel if needed, with systematic use of quinine, strychnine, tonics, and good nourishing diet. This treatment properly carried out will save more lives than the combined use of the curette, tampon and hysterectomy. Hysterectomy has a limited field of usefulness in septic metritis, multiple abscesses in the uterine wall, and thrombo-phlebitis, if it is possible to be positive in the diagnosis; but in doubtful cases drainage is to be preferred.

Herman E. Hayd ("Medical Record," May 2) believes that puerperal fever is of local origin, and that its treatment must be largely topical. The great surgical axiom is to operate early, before too great blood infection and dyscrasia have taken place. Most cases of puerperal infection recover under simple treatment; when, however, suppuration occurs, tentative, tonic, and building-up treatment is out of the question, and a laparotomy, vaginal hysterectomy, or simple incision through the vaginal vault is the only course to pursue. —*American Journal of Obstetrics.*

INTERMEDIATE PRODUCTS OF METABOLISM AS A CAUSE OF ECLAMPSIA.

W. H. Massin (cent. f. gyn) gives the following as a result of his investigations:

Physiological experiments show:

1. The importance of normal hepatic function for the proper oxidation of animal products.
2. The physiological and toxicological significance of carbonic acid, which is a product of incomplete oxidation of nitrogenous substances, and causes symptoms of intoxication similar to eclampsia.

Microscopical researches show:

1. That the parenchyma of the liver is subject to serious pathological changes, which must disturb its physiological functions.
2. That other parenchymatous organs as the kidneys show changes indicative of a severe general intoxication.

A careful analysis of the urine of eclamptic women by Hahn, of Berlin, and Prof. Nencki, failed to show any

increase of carbonic acid over normal urine. After these analyses, Massin turned his attention to other products of defective oxidation, especially leucomaines. Prof. Paehe showed by his analysis:

1. That there exists an aleto-intoxication in eclampsia.
2. That the oxidation of nitrogenous substances in eclamptic women, measured by the proportion of the total nitrogen in the urine to the nitrogen of the urea, is considerably diminished.
3. That the quality of the leucomaines in the urine previous to an attack is increased from two and a half times to thirteen times above normal, but decreases after an attack. These results seem to justify the assumption that eclampsia is an intoxication by leucomaines, or, in other words, leucomainoemia. If the liver, one of whose functions is to destroy the leucomaines, is unable to perform this oxidizing function, a general overwhelming of the system with leucomaines occurs, producing clonic and tonic spasms, and inducing acute disease of the parenchymatous organs, as liver and kidneys, thus rendering the elimination of the poison impossible. Deficient oxidation may be found in the urine of pregnant women not eclamptic. Why, then, is eclampsia so rare? They may tolerate it until some irritation of the nervous system occurs, and this is best found in severe and prolonged labor pains, or great anxiety. These conditions are met with most frequently in primiparae, and so also is eclampsia.

PHARMACOLOGY AND THERAPEUTICS.

IN CHARGE OF

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THE ROYAL COLLEGE OF PHYSICIANS OF LONDON, AND PHARMACOLOGY.

That the Royal College of Physicians of London, a body corporate, and entrusted, under the General Medical Council, with the duty of maintaining the standard of efficiency in candidates for the practice of medicine (as distinguished from surgery) in the United Kingdom, should have removed Pharmacology from the list of subjects for examination, seems so incredible that, were it not that "The Medical Press and Circular" (May 13, 1896) comes out so strongly condemnatory of such action, one would doubt the evidence of one's sense of sight. To quote:

“It is satisfactory to find that the curious and indeed inexplicable action of the Royal College of Physicians of London, in expunging pharmacology from the list of subjects for examination, has not been allowed to pass without protest on the part of various eminent therapeutists. We learn on the one hand that Dr. Lauder Brunton has decided to resign his post as examiner in *Materia Medica*, of the college, and it must be admitted on all hands that the loss of the services of so distinguished an authority is of itself no light matter, especially as it is rumored that other resignations are not unlikely to follow. Dr. Murrell and Dr. MacAlister, of Cambridge, have each entered their individual protest against this retrograde step, and matters have assumed such a serious aspect that Dr. Clifford Allbutt and Dr. Bradbury have also publicly formulated their views on the subject. The process of ‘climbing down’ is never an agreeable or graceful proceeding, and it must be peculiarly repugnant to the haughty directors of this venerable, but not always venerated, institution. That some such process, however, will have to be gone through is probable, even if, to bring it about, the supreme powers of the General Medical Council have to be invoked.” The “Press,” after pointing out the issues at stake, and the almost disastrous effect on the standard of medical education were the schools to drop a subject which the licensing body had declared of not sufficient importance to examine in, continues: “It is not, however, so much on the general principles of increasing competition, requiring more stringent examinations, that we take our stand in urging the abrogation of this ill-timed resolution, but upon the intrinsic importance of the branch of study so summarily eliminated from the scheme of requirements. Pharmacology, as we have already remarked, is even more indispensable to the education of the medical practitioner than is anatomy to the surgeon; yet none, so far, has had the courage to suggest that anatomy should be discarded by the curriculum.”

The subjects doubtlessly will be brought up at the spring meeting of the Council, and there ought to be no question but what the unfortunate decision will be reconsidered. England already is far enough—as far as she can afford to be—behind Continental countries in her devotion to the realms of research in drugs. Already Germany excels in researches in synthetical chemistry, which has yielded, and is continuing to yield, many new agents to the therapeutist, and France has long been famed for her studies in remedial measures. It is no exaggeration to say that should the announcement not be withdrawn, it will prove the most serious blow to the prestige and standing of English graduates and recipients of the degree yet experienced, and will undo the years of hard work, untiring effort and constant watchfulness which has brought the degree to the present status in the medical profession of the world.

APOLYSINE.

(Monophenethylin.)

Drs. Leon V. Nevcki and Joseph van Jaworski, in a series of experiments on animals, themselves, and their colleagues, and finally upon a large number of clinical cases, have demonstrated the superiority of apolysin to phenacetine, which it closely resembles. Both phenacetine and apolysin contain para-phenetidín; but in the latter, a citric-acid radical takes the place of the acetic acid radical of the former, which replaces the H atom in the amide group. Apolysin is a yellowish-white crystalline powder, with a sour taste, and faint odor soluble in 50 parts cold water, 25 of hot water, in alcohol and glycerine. So far as therapeutic effect is dependent on chemical composition, we should think it would be harmless, and would be decomposed in the body into para-amidophenol and para-phenetidín, ethyl, and citric acid, the last further oxidized into CO₂ and water. The first two probably depress the temperature, and the ethyl relieving pain. The drug was tested clinically in pneumonia, scarlet fever, pyaemia, follicular tonsillitis, erysipelas, hemicrania, sciatica, headache, neuralgias and lumbago, and was generally given alone, only occasionally combined with caffeine or bromides. The general conclusions were that it depressed febrile temperature, diminished the pain and hyperaesthesia of neuralgia, caused no unpleasant after-effects, but should not be given on an empty stomach, or where there was gastric hyper-acidity. Being very soluble, it was quickly absorbed, and effects were correspondingly rapid; and being non-poisonous, large and frequently repeated doses could be given. The usual adult dose is from 8 to 30 grms a day, though three times the latter quantity can be safely administered.—*Allgemeine Med. Cent. Zeitg.*, 1895, 60-61-62; *American Journal of Medical Sciences*, March, 1896.

BORO-SALICYLATE OF GLYCERINE.

Boric and salicylic acids, when heated in the presence of glycerine, dissolve in large proportions; but on cooling, the mixture soon becomes turbid, forming a thick and granular mass. If this mixture be now heated anew until it boils, and a small quantity of calcined magnesia added, the solution, after cooling, remains perfectly limpid. The product thus obtained is miscible with water in all proportions. This boro-salicylate of glycerine enables the operator to obtain extemporaneously a solution containing equal parts of the two acids at a degree of concentration impossible with any other method. Moreover, the microbicide and antiseptic properties of the salicylic and boric acids are in no wise affected by their being transformed into a neutral or basic salt. The following is the formula:

	Grms.
Boric acid.....	10
Salicylic acid.....	10
Distilled water.....	10
Thirty per cent. distilled glycerine.....	40

Heat the mass in a flask until it boils, then add one grm. calcined magnesia; reduce heat and evaporate all the water, obtaining after cooling 50 c.c. of the glycerine, or boro-salicylate, 5 c.c. of which will contain exactly one grm. each of salicylic and boric acids.—Coblentz, "The Newer Remedies," 1896.

POCKET SODA WATER.

An invention has been perfected, which professes to enable anyone to carry a dozen bottles of soda water or other "mineral" in his waistcoat pocket. It consists of a special stopper to an ordinary soda water bottle, and a small steel capsule, into which is compressed about a drachm of solid carbonic acid gas. The bottle is filled with drinking water, either flavored to taste or not; the capsule is placed in position on the stopper, and the bottle is closed. By the act of closing, the capsule is penetrated by a pin which is in the stopper, and the CO₂ is set free. A few shakes of the bottle, and the soda water is fit for drinking. But the longer it is kept the better it is. Messrs. Read, of Broad street, London, are the patentees.—*Medical Press*, No. 2975, May, 1896.

IODIDES AS TÆNICIDES.

J. H. Newington (*Med Weekly*, XV. 1895).

Newington reports one of his patients as passing a large tape-worm after having taken the following mixture:

Potassium Iodide,	35 grains.
Iodine,	11½ grains.
Water,	1 fl. oz.

Dose—ten drops three times daily.

On subsequently giving the mixture to several patients having tape-worms, in every instance the tænia was passed dead, and no relapses ever occurred.

TASTELESS SYRUP OF IODIDE OF IRON.

(*Pharm. Leitsch. f. Russl.* XXXIV, 1895.)

Tasteless ferrous iodide is first prepared, as follows:

Iodine 81-85 grms., mixed with sufficient quantities of iron and water to form iron iodide; solution is filtered, and in the filtrate 40.87 grms. iodine are dissolved: 130.25 grm. citric acid are dissolved in sufficient water, and exactly neutralized with potassa; the two solutions are mixed, and as soon as a green coloration appears, the whole is evaporated to dryness. The resulting crystalline mass is stable except in direct sunlight, the required quantity of this salt is then dissolved in a little water, and syrup added to correspond to pharmacopœal strength.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, March, 20, 1896.

A. D. BLACKADER, M.D., President, in the Chair.

PLASMODIUM MALARIE.

Dr. F. G. Finley demonstrated specimens of the malaria plasmodium taken from a patient suffering from tertian ague, acquired six months previously in Massachusetts.

He stated that plasmodium was now universally recognized as the etiological factor of the disease in Europe and America, although a number of Indian medical men still denied its presence altogether, or regarded it as being of accidental occurrence.

All Western observers, however, agreed in regarding the parasite as being constantly present in malaria and in no other disease. Unfortunately the organism had not yet been obtained in pure culture outside the human body, but inoculations of blood from malarial patients into man have produced the disease in a number of instances, the incubation period being usually eleven or twelve days.

In making observations on malarial blood, strict attention to technique was necessary. Cover glasses and slide must be carefully cleansed in alcohol and ether. A small drop of blood is taken from the finger after being washed with alcohol, the cover glass brought in contact with it, and the cover laid on the slide, so that the drop spreads out in an even and thin layer. The preparation, if successful, should show neither rouleaux nor crenated corpuscles. The plasmodium was picked out readily by the minute specks of pigment in the blood corpuscle, when examination with 1-12 immersion lens showed the rapidly moving amoeboid body within the corpuscle and the pigment at its periphery. Different forms, representing some of the phases of development and their relation to the stages of the paroxysm, were shown and described.

Dr. J. G. Adami called attention to the rather curious fact that in the East, where malaria is so prevalent, instead of the tendency being to confirm the observations of Laveran and of the Italian and American observers, the opposite appeared to be the case, and there was showing itself a remarkable amount of scepticism on the part of some of the leading medical men in India, Hong Kong, &c. Probably in these regions the very frequency of malaria complicating other conditions was the main cause of the doubt that was beginning to find definite expression.

Dr. H. A. Lafleur did not think that any observations made in the East at all weakened the evidence that the plasmodium malarie was the cause of malaria. If there was one disease in which observation was conclusive, it was malaria. To claim that the parasite was present in patients suffering from diseases other than malaria, was begging the question. The consensus of opinion now was, that when the parasite was present, one was dealing with malarial infection no matter how atypical the symptoms might be. This was particularly the case in chronic forms with symptoms of anaemia and splenic enlargement, in which by repeated examination crescentic bodies could be demonstrated. The history of the discoveries made in malaria illustrated the point that a disease is often best studied where it is not very prevalent.

Dr. T. D. Reed had had an opportunity, while in Baltimore recently, of seeing a brilliant diagnosis by Dr. Osler. Observation of a slide was made, happily, just at the time to find a peculiar appearance of the organism which precedes a chill. The patient had a chill just as predicted.

PRIMARY CANCER OF THE VAGINA.

Dr. F. A. L. Lockhart exhibited the specimen and related the history of the case.

GANGRENE OF THE LUNG.

Dr. J. G. Adami exhibited specimens from a case.

Dr. C. F. Martin referred to the point that in abscesses of the liver caused by the amoeba of dysentery, the products of purulent inflammation were generally absent. One did not get pus cells, but necrotic material. In two cases of abscess of the liver, which he had recently examined, he had searched in vain for the amoeba of dysentery. The contents, however, had also shown this sort of necrotic material, and yet cultures had not shown the presence of bacteria. The question was thus raised, whether, in an abscess of the liver, the leucocytes were especially apt to be broken down and nothing but detritus to be found. Possibly the structure and nature of the liver tissue would account for this tendency to the necrosing of cells.

Dr. H. A. Lafleur had seen a similar case in Baltimore which had been looked upon clinically as one of pulmonary tuberculosis, although the examination of the sputum failed to show the bacilli. At the autopsy there were found patches of interstitial pneumonia with several necrotic areas, which were looked upon by Dr. Welch as due to pressure of the sclerosed tissue cutting off the circulation. He (Dr. Lafleur) once, while examining a horse, had met with a condition exactly similar to Dr. Adami's specimen, and had thought that it was tuberculosis until the veterinary clinician explained that that disease was very rare in the horse.

THYROID FEEDING IN THE TREATMENT OF INSANITY.

Dr. T. J. W. Burgess read a paper on this subject.

Dr. Wesley Mills was surprised that there had not been more applications of this remedy reported before the Society. He referred to a dog, shown by him three months before, from which he had removed one-half of the thyroid gland. After the animal had thoroughly recovered from the operation, he had removed the other half, when the dog had presented the same symptoms as after the first operation. He had, the day before, commenced feeding the dog (as well as an intact dog, as a control experiment) with thyroid extract. Within two weeks he had commenced to emaciate, etc., but finally developed tetanic spasms and died in a fit, just two months after the operation, while the usual time was less than two weeks. The feeding with the extract was continuous and the dose varied from one to three (mostly two) of Armour's five grain tablets daily.

Dr. W. S. Morrow, referring to the marked effect of thyroid feeding in cases of Cretinism, related the following case: On February 27th he was called to see a baby five months old, and found its tongue greatly swollen and almost filling its mouth. The large size of the tongue had been noticed immediately after birth. He put the case upon $\frac{1}{4}$ grain doses of Armour's desiccated thyroid, and in a few days there was marked improvement in the prominent symptoms which had been dyspnoea and constipation. After three weeks treatment the tongue was now almost down to normal size. Enquiry as to the occurrence of goitre within the family of either of the parents had resulted in negative results, and the only fact he thought likely to be of interest was that they were both natives of Glengarry where goitre was fairly common.

Dr. W. E. Deeks referred to a case which he had reported a year previously of what he supposed to be ichthyosis simplex; and

he had administered desiccated thyroids in five grain doses, and very soon the case was completely cured. Since then another marked case had been treated, but so far without benefit.

Dr. J. G. Adami, referring to the tremor that had been observed in overfeeding with thyroid extract, pointed out that a similar tremor had been noted in the lower animals in the very opposite condition, namely, after removal of the thyroid gland, and asked Dr. Wesley Mills whether he had, in the animals experimented upon by him, been able to distinguish between the two tremors.

Stated Meeting, April 3rd, 1896.

A. D. BLACKADER, M.D., President, in the Chair.

ANGIOMA OF THE SKULL.

Dr. G. E. Armstrong showed a patient on whom he had operated.

Dr. J. G. Adami pointed out that small naevi were occasionally to be found in connection with the vault of the skull. During the last year, in performing autopsies at the Royal Victoria Hospital, he had come across two examples of the condition; in each case, upon baring the cranium, he had noticed small dark areas close to the longitudinal sinus of roughly spherical shape, and in one case actually rising slightly above the general level of the bone. These were situated close to the longitudinal sinus, but upon examination were found to be, not as might have been expected, pacchionian bodies, but were distinctly of naevoid character. Possibly Dr. Armstrong's case was a development of such naevoid conditions, starting in the diploe.

DISSECTING ANEURISM.

Dr. J. G. Adami showed a specimen of this case.

A YEAR'S EXPERIENCE IN THE BACTERIOLOGICAL DIAGNOSIS OF DIPHThERIA.

Dr. Wyatt Johnston read a paper on this subject.

Dr. F. W. Campbell thought that the profession in this city owed a great debt of gratitude to Dr. Johnston, for the way in which he had carried on the work. The question of not waiting until the diagnosis was confirmed was very important. In his opinion, it was wise to use the antitoxin at once, in cases where there was the least suspicion of diphtheria.

Dr. J. G. Adami asked whether a note of the day of the disease on which the culture had been taken, in cases of mixed infection, had been made. This he thought would greatly influence the statistics, for there would be a great difference in the relative number of streptococci present. In those cases of streptococcus diphtheria, he thought that the patients should be isolated as well as in true diphtheria.

Dr. J. B. McConnell asked if the Klebs-Loeffler bacilli, which were found in the throat a number of days after the attack, were as virulent as those present when the diphtheritic attack was in active progress, and if so, how could they remain in the throat without developing the disease. Ruffer considered that antitoxin had a bactericidal action on diphtheria bacilli, and Dr. McConnell thought there must be some such action as this which prevented growth and re-infection, in addition to its toxine destroying powers.

The President, referring to Dr. Johnston's suggestion of using an organic acid for the destruction of bacilli, said that Dr. F. Gordon Morrill, of Boston, at the last meeting of the American Pediatric Society, reported good results from the use of strained lemon

juice sprayed into the nose and throat six times a day. He said that cases in which the bacilli persisted, notwithstanding the use of hydrogen peroxide, yielded promptly to this treatment.

Dr. Johnston, in reply, stated that the cases were primary and the cultures were the first taken in each case, but there was no uniformity about the date. In subsequent cultures he had found a steady decrease in the number of the bacilli and an increase of the micrococci. Bacilli from the throats of convalescents are often extremely virulent. Dr. Park, of New York, had obtained the most virulent bacilli he had ever met with, from a mild convalescent case. The antitoxin did not seem to affect the virulence of the bacilli.

SOME INTERESTING CEREBRAL CONDITIONS.

Dr. C. F. Martin showed two specimens of diseased brains.

I. Porencephalus. He said the first specimen here shown represents a lesion not infrequently found in the brains of infants. There is a large cavity in the cortex of the right cerebral hemisphere immediately beneath the pia mater which completely closes off the cavity above. The specimen was removed from the skull of a female infant thirty days old, who had been admitted some months ago to the Foundling Hospital, under the care of Dr. Kenneth Cameron. The birth had been an easy one, and during the first ten days of her life the child had presented no evidence of disease. Then for the next five days diarrhoea supervened with slight elevation of temperature, up to a maximum $101\frac{1}{2}$ deg., and she seemed quite well for the ensuing week. On the twenty-second day the temperature suddenly rose and assumed an irregularly intermittent febrile character, ranging between 97 deg. and 107 deg., while diarrhoea supervened from time to time. The cold bath treatment was adopted and the usual internal medication, but without avail, the child dying seven days after the onset of the fever.

No hemiplegia had been observed, nor was the condition accounted for apart from the intestinal symptoms present.

The autopsy revealed mainly two conditions, one a very moderate catarrhal colitis, the other, the cerebral cyst here shown.

The right hemisphere, as is seen, contains a large cavity situated immediately beneath the pia and measuring in greatest diameter $6\frac{1}{2}$ cm. It has not extended as far as the lateral ventricle, but involves the main portion of the motor area on the right side. It contained at the autopsy a very little fluid, and the overlying pia was partly collapsed into folds upon it. Its walls were of a pale greyish-white color, with no sign of rusty pigmentation, and it was lined by very shreddy material, presenting fine irregular filaments throughout.

The skull itself was mesocephalic and rather thinner than normal.

The condition is of clinical interest inasmuch as death has been preceded by some days of pyrexia and other evidence of constitutional disturbance, so that it would suggest that the cerebral condition was the exciting cause of the symptoms. Granting this to be true, it would give evidence of a most rapid destruction of cerebral substance, and it is, I believe, generally recognized that in infants the brain tissue may be lost in an astonishingly rapid manner, while in adults the process is much more slow. It would here, however, be impossible to state that the condition had only commenced since birth.

The etiology of the condition is obscure and it has been attributed to a variety of processes, such as various obstructive and destructive lesions in vessels, to attested development, general encephalitis, etc., but it would seem that any of these different conditions may each alone induce the formation of a porencephalus.

It is a common cause of infantile hemiplegia, and Osler has gathered together 24 cases out of records on 90 autopsies performed upon infants with paralysis.

II. Pyocephalus. The second specimen was that of a pyocephalus, i.e., the presence of pus in the greatly distended ventricles of the brain.

It is interesting chiefly because of the extent of suppuration and the fact that no originating cause could be detected.

The brain was removed at the autopsy on a male infant, thirty-three days old. No special history accompanied the case, but the charts give evidence of very irregular pyrexia—averaging perhaps 100 deg.—the maximum (105 deg.) being attained three days before death. The stools were constantly loose and of a green or greenish yellow color, and vomiting came on from time to time. It is further said that a kind of opisthotonos was present during the last three or four days of the infant's illness, while the lower extremities were especially noted to be stiff. At the autopsy, in addition to some redness of the gastro-intestinal tract, there was found no sign of disease in the abdominal or thoracic viscera. The brain, as seen in the specimen, was extremely soft, much enlarged in size, and on horizontal section (according to the French method of examining the brain) the ventricles were found very much distended with pale greenish pus which had a sweet odor. The walls of the ventricles were ragged and showed considerable destruction of adjacent cerebral substance, though there was no evidence anywhere of communication with external structures.

An examination of the body elsewhere, the joints, the nasopharynx, auditory canal, for caries, trauma, etc., failed to reveal any evidence of disease, while there was no sign in the lungs of gangrene, nor in other parts of the body of foci or suppuration.

The cause must remain here undiscovered, as are not a few of such cases.

Cover slip preparations of the pus revealed a diplococcus of no special characters, and cultures taken from the pus were unsatisfactory in view of the method by which the brain was opened.

HYDATIDIFORM MOLE.

Dr. C. F. Martin presented for Dr. A. E. Vipond, a specimen of hydatidiform mole which had been obtained in the latter's practice. The patient had been in the fifth month of pregnancy, when serious and even alarming flooding supervened. Examination showed a dilated os upon which lay a soft friable mass, which bled easily. Pieces which were easily removed showed the condition to be a hydatidiform mole, and by firm pressure it was nearly all removed.

Ergot and hot douches had arrested the haemorrhage, while during the next twenty-four hours the remaining portion came away of itself and the patient made a good recovery.

CANCER OF THE RECTUM.

Dr. Wyatt Johnston exhibited for Dr. Armstrong a specimen of cancer of the rectum of the adenoid cancer type. The disease had involved the whole circumference of the gut for between two and three inches above the anus.

He also showed for Dr. Armstrong an adenoid cancer of the sigmoid flexure, which showed great constriction at the point of disease and great dilatation above.

Dr. G. E. Armstrong read the history of the first case by Dr. Kinghorn, as follows:

Wm. M., aged 58, was admitted on February 25, 1896, to the Montreal General Hospital, complaining of passing blood per rectum. The trouble was first noticed ten months previous to admission, and up to that time he had had no trouble of any kind about the anus.

The onset was gradual and the first symptom noticed was irregularity of the bowels. Previous to this time the bowels had been very regular, but it gradually came about that they moved only every third day. The stools were fairly formed, but rather contracted and of a pale color. Some months later he noticed the bed-clothes soiled in the morning with a blood-colored fluid, having a peculiar, rather sweetish, offensive odor. This fluid came to be passed both day and night, and increased in amount. Pain was first noticed about four months after the onset of symptoms, and was felt at the bottom of the spine and at the anus.

Five months after the onset he had great frequency of micturition during the night, but had to wait sometimes fifteen minutes before the stream would come away. This condition lasted until six weeks previous to admission.

About six months after the onset he had an attack of diarrhoea, which lasted one week, but otherwise the bowels gradually became more constipated, and finally would not move without a purgative.

While the above symptoms were developing he lost about ten pounds in weight, and though his appetite continued good he became pale and lost strength.

He was born in England, and when younger was ten years in the British army, in an infantry regiment. Of late he has worked at dry goods packing. His occupations have always kept him on his feet. His health has always been good and there is no history of disease either in childhood or adult life. He has always been a heavy smoker, and up to the present year has used alcohol very freely. Other than a bubo thirty years ago he has had no venereal diseases. There was no history of haemorrhoids or other trouble about the rectum.

The family history as regards malignant disease was quite negative.

On admission his appearance was that of a well-nourished man of 58 years. The face had a pale and rather cachectic look. When in bed he had to lie on either side, not in the dorsal position, as this position caused him pain in the rectum and over the coccyx.

Examination showed a few external haemorrhoidal tags. The entrance of the finger into the rectum caused a profuse haemorrhage, accompanied with a blood-tinged serous liquid. There were felt masses of tissue which were soft, friable and bled readily, and entirely surrounded the lumen of the bowel, and at the side of the prostate the lumen of the bowel was almost occluded. The finger could just reach above the growth.

The respiratory, vascular, digestive and urinary systems were normal.

On March 5th he was given ether and an inguinal colotomy performed after Maydl's method. The rectum was daily irrigated with boracic acid solution, and the bowel opened by a cautery on the third day. Three weeks later the bowel was divided completely across with the thermo cautery.

Pathological Report by Dr. Wyatt Johnston.—The bowel presents very large ragged ulcerations with raised edges and infiltrated base involving the entire circumference of the gut for the extent of about three inches. Microscopic examination shows the growth to be adenoid carcinoma, with secondary involvement of glands, some of which are situated on the limits of the incision.

Dr. Armstrong added that he had removed the growth by Heinecke's method—The patient was first placed in the lithotomy position and a curved incision made in front of the anus, and while an assistant held a sound in the urethra the rectum was carefully separated from the urethra, prostate, and vesiculae seminales. The patient then being turned on his side, the soft parts and sacrum and coccyx were divided longitudinally up to the lower border of the third sacral foramen. The sacrum was then chiselled across and the osteo-plastic flaps turned out. The rectum was then brought well down, the peritoneal cavity deliberately opened, and the bowel and meso-rectum divided well above the limits of the disease, the peritoneal cavity being closed by suturing the peritoneum to the anterior wall of the rectum. The osteo-plastic flaps were then replaced and the end of the bowel brought out for drainage. This method gives good access, permits of the perfect control of haemorrhage, and interferes very little with blood or nerve supply. The patient is making a very satisfactory recovery.

AORTIC ANEURISM.

Dr. A. E. Orr exhibited the specimen and read a report of the case.

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Editorial.

COLLEGE OF PHYSICIANS AND SURGEONS PROVINCE OF QUEBEC.

The next semi-annual meeting of the governors of the College will be held in the Laval University building on the 2nd of July next. The Provincial Medical Board, composed of forty governors, elected by the physicians of the province, numbering about 1,900, is the representative body of the medical profession and medical teaching organizations, and has imposed upon it the duties of legislating for and regulating all matters pertaining to the welfare of these constituencies. Its actions, methods and decisions are, therefore, of the greatest interest to medical men in the province, and worthy of constant and the closest scrutiny.

The board is composed of mainly French-speaking members, there being now only some half dozen English-speaking members, so that practically our French-speaking confreres have these matters almost entirely in their own hands; but we can testify as to the fair and courteous consideration given to the minority on all occasions, and we can note with satisfaction the disposition to elevate the tone of the profession, and maintain a high standard in regard to medical education, both in respect to the matriculation and the college curriculum. At the present meeting several important matters will be considered, such as inter-provincial registration, a subject which will be fully discussed at the next meeting of the Canadian Medical Association, which meets here on the 26th of August next, and where the aim is to procure for

the Dominion a uniform standard of matriculation, a uniform standard of medical education, and a uniform method of examination.

The subject of the relation of the profession to lodge practice, which was referred to a committee at the last meeting, will be considered, and an attempt will be made to remedy the abuses of this kind of practice, and, if the custom cannot be entirely abolished, to mitigate some of the features which are derogatory to the interests and honor of the profession. Considerable agitation of this subject is at the present time being reported as occurring in England, where the abuse of club practice is very general; many belong to clubs who are quite able to pay a proper fee to a practitioner. It is quite proper that only those with small incomes should receive the benefits of the low rates paid by clubs and benefit societies, and it is preferable that they should thus nominally pay for medical attendance rather than be recipients of hospital relief, which is intended only for the absolutely poor, and not for attendance upon those able to pay adequately for the treatment. The injustice to the general practitioner, and especially the younger members, of the want of discrimination as to the class of patients who should benefit by hospital attendance is a subject that requires as much attention, from a medical standpoint, as that of benefit societies.

The manner of voting has caused some dissatisfaction among the members of the Board, and others. The fact that any member can vote by proxy has made it possible for one or more members, by taking the trouble to do so, to secure sufficient proxies to control personally the election of the board and officers, and the decision on any matter that may come up. The subject is worthy of consideration, as such a possibility should be guarded against. "L'Union Médicale" has taken this matter up very energetically, regarding it as a crying evil. They recently sent the following circular to the nine hundred subscribers of the journal, requesting signatures to it, which we understand has been largely signed:

"I believe that the actual mode of voting for the election of the members of the Provincial Medical Board is defective, because it allows people who have an interest in doing so to control the voting. I am persuaded that a system of voting by secret procuracy, at the same time that it would allow the profession to vote without any undue influence, would pre-

vent any possibility of controlling the voting, a thing that is indispensable when we want an election to be the result of the will of the electors.

"I endorse entirely Drs. Rottot and Fafard in the efforts they are making in the Provincial Medical Board to obtain a measure that seems to me just and reasonable.

"Signed. _____."

The Montreal Medico-Chirurgical Society have been requested also to express their views on this matter.

CANADIAN MEDICAL ASSOCIATION.

We learn from the general secretary, Dr. Starr, of Toronto, that the meeting here in June, under the presidency of Dr. James Thorburn, will probably be the largest yet held, judging from the number who have already expressed their intention of being present.

Among those who have promised to contribute to the programme are: Prof. Adami, address in bacteriology; Dr. Geo. Wilkins, address in medicine; Dr. John Stewart, Halifax, address in surgery; and Dr. J. F. W. Ross, Toronto, address in midwifery. In addition to these there are: Drs. Osler, Johns Hopkins, A. McPhedran, J. E. Graham, A. Primrose, J. Price-Brown, Toronto; Drs. J. B. McConnell, A. Laphorn Smith, H. S. Birkett, Montreal.

We will in the July number be able to give a detailed programme. We trust there will be a rally in Montreal from all parts of the Dominion on August 26th, when old college friends may meet and rehearse incidents of yore, and bind still more closely the links of former friendships, at the same time intellect is stimulated by the exchange of thought and discussion which the reading of so many interesting papers must arouse. To those who have not seen the present complete condition of the magnificent hospitals of Montreal, a visit to them will not be the least interesting and profitable of the attractions offered in the way of entertaining the visitors to the Montreal meeting.

THE WILLIAM F. JENKS MEMORIAL PRIZE

This triennial prize of \$400.00 is now offered for the fourth time, and is open for competition to the world. The subject to be written upon is "The etiology and pathology of diseases of the endometrium, including the septic inflam-

mations of the puerperium." It must be sent to the College of Physicians of Philadelphia before January 1st, 1898, addressed to Barton Cooke Hirst, M.D., typewritten, and distinguished by a motto, with the name of the writer, in a sealed envelope.

The "Virginia Medical Monthly" has, since April, 1896, become a semi-monthly, and has accordingly changed its name to "The Virginia Medical Semi-Monthly."

Miscellaneous.

HYPNOTIC CRIME.

The possibilities of post hypnotic suggestion would seem at first glance to open a wide field for criminal suggestion, but the evidence does not, I think, justify much apprehension on that score.

When the patient's consciousness is much disordinated by the suggestion, he is usually unable to co-ordinate himself to his environment, and is, of course, not fitted to do anything requiring alert mental powers, much less a crime. When the suggested idea expels inconsistent states, the case is almost as bad. Prof. Liegeois dissolved a white powder in water, and told Mme. C—, one of his patients, that it was arsenic. "I said to her: 'See M. D—, he is thirsty; he is always wanting something to drink; you will offer him this.' 'Yes, monsieur.' But D— asked a question which I had not foreseen; he asked what was in the glass proffered him. With a candor which set aside all thought of simulation, Mme. C— replied, 'It is arsenic.'" Clearly it would not do to intrust to Mme. C— the execution of a suggested crime.

Again, when the emergence of the posthypnotic suggestion does not affect the upper consciousness at all, but coalesces with it, it is apt, as I have already pointed out, to meet with resistance from the patient's habitual principles of conduct. Dr. De Jong reports that a little Jewish girl of ten, whom he found very suggestible, repeatedly obeyed his posthypnotic suggestion that she should steal a piece of money left lying upon the table, but one Saturday she disobeyed. When asked why, she said: "It is the Sabbath day; I cannot touch money." Another of his patients performed all manner of make-believe crimes at his suggestion, but, when he suggested something the performance of which would have shocked her modesty, she refused, and she refused also to betray a trivial secret which he had got his cook to confide to her.—From Posthypnotic and Criminal Suggestion, by Prof. W. R. Newbold, in "Appleton's Popular Science Monthly" for June.

PUBLISHERS DEPARTMENT.

Frank Stockton's new story, "Mrs. Cliff's Yacht," which begins in the April "Cosmopolitan," promises to be one of the most interesting ever written by that fascinating story-teller. Readers of "The Adventures of Captain Horn," will find in "Mrs. Cliff's Yacht" something that they have been waiting for.

That New York City consumes nine hundred and sixty million eggs in one year; nearly three hundred thousand pounds of butter every day; and as many gallons of milk; that it eats three hundred and five million pounds of beef in a year seems astounding. And yet these figures are; in reality, very moderate calculations which Mr. John Gilmer Speed has reached upon exhaustive investigation, and embodied in an article on "Feeding a City Like New York," which he has written for "The Ladies' Home Journal."

Suggestion in Therapeutics, or the influence of mind in the cure of disease, will form the subject of an article by Prof. W. R. Newbold in "Appletons' Popular Science Monthly" for July. The cures produced by suggestion in hypnotic patients, the influence of a confident manner without hypnotism, and the "charming" of warts and sores, are among the forms in which Prof. Newbold credits this agency with useful results.

The June "Atlantic" begins with another installment of the letters of Dante Gabriel Rossetti edited by George Birkbeck Hill. This installment contains the letters for 1855. Striking features in this issue are an article upon The Politician and the Public School, by Mr. G. L. Jones, Superintendent of Schools, Cleveland, Ohio, and Restriction of Immigration by President Francis A. Walker.

Other readable articles which gives this number a varied interest are The Oubliette, one of Mrs. Catherwood's sketches of French Provincial Life; The Bird of the Musical Wing, by Mrs. Olive Thorne Miller; Orestes Brownson, the Catholic American, a striking biographical study, by George Parsons Lathrop; The Opera before the Court of Reason, by W. F. Biddle; Lord Howe's Commission to Pacify the Colonies, an important historical contribution, by Paul Leicester Ford; embodying a hitherto unpublished manuscript.

Fiction is represented by a further installment of Henry James' absorbing serial, The Old Things; a short story of Alabama life, The Price of a Cow, by Mrs. Elizabeth W. Bellamy, and The Whirligig of Fortune, an incident of the French Commune, by T. Russell Sullivan.

The book reviews include a review of John T. Morse's Life and Letters of Oliver Wendell Holmes and reviews of recent publications on history and art. Poems and the usual departments complete the issue. Houghton, Mifflin & Co., Boston.

EUROPEAN ENDORSEMENTS.

The "London Lancet," of March 28th, 1896, says editorially:—"Antikamnia is well spoken of as an analgesic and antipyretic in the treatment of neuralgia, rheumatism, etc., etc. It is not disagreeable to take, and may be had either in powder or tablet form, the latter being made in five-grain size. It is described as not a preventive of,

but rather as affording relief to, existent pain. By the presence in it of the amine group it appears to exert a stimulating rather than a depressing action on the nerve centres and the system generally. If this be so, it possesses advantages over other coal-tar products."

The concise endorsement of the "Edinburg Medical Journal," which appeared in the January issue, is equally interesting.—"This is one of the many coal-tar products which have lately been introduced into medicine in Scotland. In doses of three to ten grains, antikamnia appears to act as a speedy and effective antipyretic and analgesic."

The "Arena," edited by B. A. Flower, and published by the Arena Publishing Co., of Boston, at \$3.00 per annum, is one of the best representatives of the advanced thought of these modern times. They thus refer to the June number:

"Our June number speaks for itself. The paper by Rev. Samuel J. Barrows, D.D., editor of the "Christian Register," Boston, and a man acknowledged to be one of the most earnest religious thinkers of our time, will be of special interest to a large number of our readers. The paper by William P. St. John, President of the Mercantile National Bank of New York, will also be of special interest. Eltweed Pomeroy is at present the recognized leader of the working forces who are engaged in an endeavor to bring about direct legislation in the United States; hence his paper will be of uncommon interest. Justice Clark closes his powerful and convincing series of papers on Mexico and her phenomenal prosperity in this issue. The remarkably able paper by A. J. Utley on Bimetallism will be read by our readers with more than usual interest. Prof. Parsons is literally undermining the foundations of one of the most dangerous monopolies of America to-day in his powerful and exhaustive papers on the telegraph monopoly. His data and arguments are to-day being used as a reservoir for facts by statesmen, economists and students who believe in a republic and who are waking up to the fact that the people have 'slept over long.' But at the present time we merely desire to call attention to the strength and vital force and ability which mark the opening issue of volume sixteen of the "Arena." It is our determination to make this volume eclipse all previous volumes in ability and vigor, no less than in the conscience element, which one correspondent observes "makes the 'Arena' unique among the great and original reviews and magazines in a wilderness of literature characterized by no special progressive idea, conviction, courage, or virility."

For more than a half-century "Littell's Living Age" has been republishing the best and most important papers, biographies, reviews, stories, verses and sketches of travel, to be found in the foreign (especially the British) magazines, quarterlies and literary weeklies. During this long period it has been prized and commended for the judgment and taste exhibited in its selections. Hardly one of the eminent British authors of the past fifty years can be named who has not been represented in these pages.

Its latest issues contain many articles of present interest and permanent value. The following are worthy of special mention:—"Czar and Emperor," by Karl Blind; "Slatin Pasha and the Sudan," by Capt. F. D. Lugard; "Matthew Arnold," by Frederic Harrison; "Nature in the Earlier Roman Poets," by Evelyn Martinengo Cesaresco; "Jean Baptiste and his Language," by Howard Angus Kennedy; "Stray Thoughts on South Africa," by Olive Schreiner; "A Heroine of the Renaissance," by Helen Zimmern; "A Winter's Day in Mid-Forest," by Fred. Whishaw; and "The Story of an Amateur Revolution," by a Johannesburg Resident. In fiction, a short story, by Mary E. Mann, is particularly readable with its mixture of pathos, humor and superstition. Published weekly, at \$6.00 a year, by Littell & Co., Boston.